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ABSTRACT

This conference on the evaluation and effectiveness of postsecondary occupational education was for the purposes of: (1) providing presentations on evaluation of postsecondary occupational education in terms of programs, faculty, and institutions, (2) providing information that would better enable participants to identify some elements for evaluation, (3) providing an opportunity to exchange ideas, and (4) continuing the series of annual conferences as a joint venture between the university and postsecondary institutions. Presentations included: (1) "Strategies for Evaluation of Postsecondary Occupational Programs" by Leland L. Medsker, (2) "Commentaries on Dr. Medsker's Paper" by John Leathers and Raymond A. Pietak, (3) "Faculty Evaluation: A Project Report" by James L. Evanko, (4) "Strategies for Assessing Teacher Effectiveness in Postsecondary Occupational Programs" by Robert Wiegman, (5) "Commentary on Dr. Wiegman's Paper" by Eugene J. Kray, (6) "Teachers for Post-High School Occupational Programs" by Herbert S. Eisenstein, (7) "The Accountablility of Occupational Education to Society" by Anthony J. Salatino, (8) "Commentaries on Dr. Salation's Paper" by Fred A. Snyder and Kermit C. Morrissey, and (9) "Evaluation of the Conference" by Richard R. Olson. (GEB)

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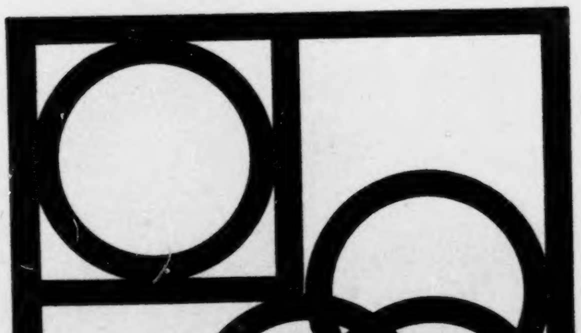
The Second Annual Pennsylvania Conference on Post-Secondary Occupational Education

Angelo C. Gillie
Editor



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Center for the Study of
Higher Education

The Pennsylvania State University

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Center for the Study of
Higher Education

The Pennsylvania State University
University Park, Pennsylvania

June 1971

FOREWORD

In its role as a cooperating and supporting sponsor of the Second Annual Pennsylvania Conference on Post-Secondary Occupational Education, the Center for the Study of Higher Education believes it is being highly responsible as well as responsive to the higher education community of the commonwealth. Occupational or paraprofessional education, post-secondary in character, is of immense significance. The young person who enters the labor market today is required more and more to have an armamentarium of considerable understanding and skill in a somewhat specialized area. The post-secondary institutions have, to some degree, stabilized education in the technical areas. They are, however, not much beyond the pioneering state in the area of human service occupations. Sound analysis, as represented in this conference report, can only be helpful to those who labor at the task of providing occupational education.

The focus of this conference on evaluation and effectiveness is also appropriately timely. Higher education is today being asked to be accountable as it has never been asked to before. This conference and this report are themselves evidence of the sensitivity of higher education to its responsibilities.

G. Lester Anderson
June, 1971

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INTRODUCTION

Angelo C. Gillie
Associate Professor, Department of Vocational Education
The Pennsylvania State University

I think it would be appropriate to briefly review the series of events that culminated in the planning of this annual event. The idea of conducting a statewide conference on post-secondary occupational education for Pennsylvania evolved from several discussions with Robert Knoebel, who is presently Director of the Bureau of Academic Services, Department of Education of the Commonwealth of Pennsylvania. Mr. Knoebel was Director of the Bureau of Community Colleges of the Department of Education at the time. These initial meetings took place at the American Association of Junior Colleges' annual convention in Atlanta in March 1969.

Our original basis for discussions was our common belief that The Pennsylvania State University and those post-secondary institutions that offered occupational programs should enter into joint ventures that could lead to the overall betterment of post-secondary occupational education in Pennsylvania. These conversations ranged over a number of possible cooperative activities including research studies, teacher preparation programs and conferences. There has been some progress made in each of these areas, but the first one to be acted upon dealt with a statewide conference on post-secondary occupational education.

An advisory committee was established in early spring of 1969, to delve into the possibility of planning the statewide conference. This committee was under the leadership of Robert L. Sheppard, Chief of

Occupational Education Programs for the Bureau of Community Colleges. The committee consisted of educators from several of the community colleges, the Department of Education, and from the main campus of the university.

After considerable debate and planning, the first conference was conducted in October 1969, with its overall topic, "Post-Secondary Occupational Education: An Overview and Strategies." The conference received strong support from its inception. The community colleges and what was then the Bureau of Community Colleges in the Department of Education were actively involved in the planning. The Department of Vocational Education and the Center for the Study of Higher Education were the university components actively involved in the planning and financing of the event. A monograph entitled Post-Secondary Occupational Education: An Overview and Strategies was one of the outputs of the first conference.

Another outcome, and even more important to us in Pennsylvania, was the resultant improvement in the relationships between the various institutions in the state that offered post-secondary occupational education and The Pennsylvania State University. An evaluation of that conference led us to believe there would be considerable value in conducting a conference devoted exclusively to post-secondary occupational education on an annual basis. The event reported in this monograph is the result of that decision and is the second of what we hope will be many annual conferences.

This conference, like the first, utilized an advisory committee as a planning vehicle. An effort was made to bring together a group of individuals that would adequately represent the various post-secondary institutions that offer occupational programs in Pennsylvania (the committee members are listed in Appendix C). Mr. Sheppard was again asked to serve as chairman. It should be noted that in addition to being one of the most knowledgeable persons on post-secondary occupational education in Pennsylvania, Mr. Sheppard has also displayed a remarkable degree of skill in utilizing the diverse suggestions offered by the advisory group. Fiscal support came from the sources that sponsored the first one. The Center for the Study of Higher Education subsidized the major cost of the conference and this publication. Important financial support was also made available by the Department of Vocational Education.

The institutions represented at this conference were more diverse than those of last year, with more involvement by the Commonwealth campuses of Penn State, private post-secondary schools and area vocational-technical schools. The major objectives of the conference were: (1) to provide an authoritative presentation on evaluation of post-secondary occupational education in terms of programs, faculty, and institutions; (2) to provide the participants with information that would better enable them to identify some elements and useful approaches for evaluation of programs, faculty, and their institutions; (3) to provide an opportunity for educators concerned with post-secondary occupational education to meet for the purpose of exchanging ideas and viewpoints on evaluation; and (4) to continue the series of annual conferences on two-year college occupational education as a cooperative venture between the university and post-secondary institutions that offer occupational programs.

Our speakers were selected because of their expertise in the area of evaluation. Dr. Medsker, a leading national figure in the two-year college movement for many years, provided us with valuable insight into strategies for the evaluation of post-secondary occupational programs. He made a distinction between the process and the product approach and drew upon the Tyler and Glaser evaluation models. One of the major points made by Medsker was about the need for a systems approach to the evaluation of occupational education (which starts with goal statements and ends with evaluation of goal achievements). His presentation also discussed the difficulty in conceptualizing vocational education in a changing society; ascertaining the objectives of occupational programs; and evaluating programs designed primarily for retraining purposes. He then went on to distinguish between external and internal evaluation, pointing out that evaluation by state agencies and accreditation of programs will become increasingly more important in the years ahead, predicting that more accountability will be demanded in all aspects of education. Also predicted by Dr. Medsker was the emergence of new kinds of worker capabilities not treated in the present training and education programs. The treatment of this topic was concluded with reactor presentations by Drs. John L. Leathers and Raymond Pietak.

Dr. Robert Wiegman, also a nationally known educator in the two-year college movement, presented the major paper on the topic of faculty evaluation. He presented and elaborated on six suggestions for use in assessing teacher effectiveness: 1) teacher selection interviews should include questions dealing with teaching ability; 2) evidence of teaching performance should be collected on a continuing basis; 3) it should be determined whether the teacher has stated his course objectives in clear enough terms for the students to know what is expected of them; 4) an assessment of the product of instruction should be made, including a study of the employment pattern of the graduates, as well as other data derived from well-designed and conducted follow-up studies; 5) determination of the instructor's service to the college; and 6) a search for evidence as to how the instructor provides for input from the field should be made. For example, to what extent does he utilize advisory committees? How does he remain up to date in his specialized field? To what degree and in what manner does he maintain contact with the students outside the classroom? Dr. Wiegman's concluding statement went to the heart of the matter: "If we wish to improve instruction in our colleges the first order of business should be that we focus on that topic." The treatment of this topic was rounded out by the presentations of Dr. Eisenstein and Mr. Kray.

Dr. Salatino dealt with the problem of evaluation of institutions, the third topic of the conference. He listed several types of contemporary approaches that are being used for purposes of accountability in education including the program, planning, and budgeting system; the national assessment of educational progress; performance contract programs with private concerns; state program audits; and audits at the federal level. Dr. Morrissey and Mr. Snyder followed with presentations in response to Dr. Salatino's paper.

Upon reviewing the presentations made on the three topics (evaluation of programs, faculty, and institutions in post-secondary occupational education), it appears that they have been well covered. The extent to which the conference participants agreed with this conclusion is dealt with in the evaluation section of this publication.

The editor wishes to express his appreciation for the financial assistance received from the Center for the Study of Higher Education and Dr. G. Lester Anderson, its director. Special thanks are also offered to Richard Olson and Cheryl Gumaelius for their help during and after the conference, and to Sharon M. Friedman who supervised the final preparation of this manuscript.

STRATEGIES FOR EVALUATION OF POST-SECONDARY OCCUPATIONAL PROGRAMS

Leland L. Medsker
Director, Center for Research and Development
in Higher Education
University of California at Berkeley

As one considers the subject of appropriate strategies for the evaluation of post-secondary vocational programs, he is confronted at once by the magnitude and difficulty of the problem. The magnitude is great, due in part to the rapid growth of occupational education. In the four years from 1965 to 1969, federal subsidies to vocational programs increased from $605 million to $1.4 billion. Enrollments in the same four-year period increased 46 percent over those reported in 1964. Post-high school vocational education showed the largest increase--19 percent. The number of vocational education teachers at the post-secondary level increased by 39 percent.[1] If one adds to these figures comparable data for technical occupational programs in community colleges and other types of post-secondary institutions that are supported entirely by local funds, the growth factor is even more astounding. There is also further documentation that their growth is occurring most rapidly at the post-secondary level. Furthermore, it is likely that growth will continue to be encouraged in high places. Representative Edith Green said in an address last summer at the annual meeting of the Education Commission of the States:

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[1] Data reported in ECS Bulletin (September, 1970).

> Then in the 1970s let us adopt a new Magna Carta for the vocational and technical occupations and an educational system to enforce that recognition. In Congressional action, I predict increased financial aid to this fastest growing section--our community colleges and our technical institutes.

Sheer growth naturally implies difficulty in evaluation simply because there is so much to evaluate. But there are qualitative as well as quantitative problems in evaluation. Curriculum evaluation at any level, or pertaining to any subject, is inherently difficult and although much has been written about it, a review of the literature suggests that it is the one area of education in which the least progress has been made. At first blush we might conclude that the evaluation of occupational programs would be far simpler than the assessment of academic programs, since its product can be measured more easily. However, as I shall indicate later, only minimal efforts to measure the product of occupational programs have been made. Furthermore, vocational education is a many-faceted, multi-dimensional effort that is not easily compartmentalized into neat packages for assessment purposes.

Perhaps to no one's surprise, a rather thorough search of the literature reveals a paucity of information about the evaluation of occupational education. We are indebted to Kaufman[2] for his comprehensive treatment of the subject in secondary schools, although he does not deal extensively with strategies. Numerous individual studies of vocational programs (mostly at the local level) are reported through the ERIC Clearinghouse for Higher Education and dissertation abstracts, but generally there is a dearth of comprehensive treatments of the subject.

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[2] J. J. Kaufman, et al, The Preparation of Youth for Effective Occupational Utilization, The Role of the Secondary School in the Preparation of Youth for Employment (University Park: Pennsylvania State University, 1967).

As I scanned the literature and pondered the subject, I concluded that it takes a venturesome individual to discuss strategies, but nevertheless, it is a worthwhile task to undertake. I deal with the topic not as a vocational educator, but simply as one concerned with realistic educational programs in post-secondary institutions. In the remarks to follow, I first discuss, within the context of evaluative procedures in general, some of the approaches and techniques for evaluating these vocational programs. This is followed by some comments about certain problems and issues that arise in connection with such evaluation and I conclude with a few remarks concerning possible directions for the future.

You will observe that my plea is for a more thorough, systematic approach to evaluation--an approach that places primary emphasis on product instead of on process. I divulge this now so that my position is clear from the outset.

Approaches and Techniques

Let us turn first to a discussion of what appear to be the two principal approaches to the evaluation of occupational programs, namely, the process approach and the product approach. The process method is one that is largely concerned with how the program functions, including the various environmental elements that presumably determine the degree of its success. This approach would evaluate such factors as the curriculum and how it is developed, the use of advisory mechanisms, the equipment used for instructional purposes, the quality of the faculty, the methods of teaching, the process of selecting students, and the manner in which placements are made, to name only a few. The premise is that by an evaluation of program characteristics, conclusions regarding the viability of the training can be inferred.

The product approach is based on concern for the student and what the training does for him. It begins with attention to program objectives and ends with an inquiry into program outcomes, both qualitative and quantitative. It is particularly concerned with how well the program fulfills its objectives: the extent to which students persist, how they find jobs appropriate to their training, and how they perform in these jobs. Naturally, there are other overall product concerns, an important one being the extent to which the training program meets local, state, and national manpower demands.

Differences between the two approaches are readily apparent. One is descriptive, the other attempts to measure performance. One asks how it is done, the other asks how well it is done.

An obvious question is whether the two approaches are mutually exclusive. An equally obvious answer is that they are not. In fact, given the assumption that program characteristics are related to outcomes, one must deduce that both approaches are important. This is so to the extent that characteristics partially explain the level of success that a program enjoys. Thus, they constitute independent variables in accounting for various degrees of performance. This concept will be returned to later.

A much more significant question is whether either of the two approaches is more important than the other--or at least whether either should constitute the basic approach. This issue must be examined within the framework of existing concepts about educational evaluation in general. Naturally it is impossible to cover here the many emerging ideas concerning how best to evaluate educational programs. Many of them date back to the model originally advocated by Ralph Tyler in the 1930s, in which he stressed the development of educational objectives stated in operational terms so that data could be collected to determine how well the objectives are achieved. The idea subsequently was further advanced by Gagné and by many others. Writing in the Spring 1969 issue of the Journal of Trade and Industrial Teacher Education, J. Thomas Hastings, director of the Center for Instructional Research and Curriculum Evaluation at the University of Illinois, dwelt at some length on an evaluation model developed by Stake as depicted in Figure 1. As pointed out by Hastings, the schema, while placing heavy emphasis on outcomes, also emphasizes other aspects of the educational program. The rows represent three aspects of the program. By "antecedents," it is meant those aspects of the situation that come before but are highly relevant to the instructional program under consideration. They include such things as student characteristics, the attitudes and background of faculty, and the general school environment. "Transactions" mean the operational aspects of the actual program. The "outcomes" row refers not only to student outcomes but also to such outcomes as the impact of the program on the institution itself and on its constituency. The four columns of the matrix are described as the sources of data for evaluation. "Intents" refers to expectations expressed by students, parents, employers and others. The column headed by "observations" refers to expectations gleaned from tests, interviews, and other techniques. "Standards" implies the collection of information related to expected performance levels in such matters as admissions, operational modes and final student outcomes. The final column suggests the possibility of collecting data on the value judgments and the people or groups who make them. Of this Hastings said:

> There are various value orders even where the values themselves are agreed upon as generally important. In collecting our

FIGURE 1

Data to be Collected*

INTENTS	OBSERVATIONS	STANDARDS	JUDGMENTS
ANTECEDENTS			
TRANSACTIONS			
OUTCOMES			

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*R. E. Stake, "The Countenance of Educational Evaluation," Teachers College Record, 68 (1967), 523-540.

> data at any of the levels (from Congressional committee through the State Department of Public Instruction to the teacher), consideration must be given to describing the kinds of judgments which are made. The question, "What kinds of groups make what kinds of judgments?" is one that we have too often left out of the evaluative process. In many cases we have missed by that amount an optimal movement toward rational decisionmaking [sic].

I have described the Stake model as discussed by Hastings only to indicate the many variables and their interrelationships that may well be considered in the evaluative process. In fact, this is the primary value of any model regardless of its purpose.

A more simple and direct evaluation approach has been described by Robert Glaser[3] in which he suggests the following sequence of operations:

1. Outcomes of learning are specified in terms of the behavioral manifestations of competence and the conditions under which it is to be exercised.

2. Detailed diagnosis is made of the initial state of a learner coming into a particular instructional situation. This careful workup of student performance characteristics relevant to the instruction at hand is necessary to

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[3] R. Glaser, Evaluation of Instruction and Changing Educational Models (Los Angeles: Center for the Study of Evaluation of Instructional Programs, University of California, 1968).

pursue further education.

3. The immediate instructional step consists of educational alternatives adaptive to the classifications resulting from the initial student educational profiles.

4. As the student learns, his performance is monitored and continuously assessed at longer or shorter intervals appropriate to what is being taught.

5. Instruction and learning proceed in a cybernetic fashion, tracking the performance and selections of the student. Assessment and performance are interlinked, one determining the nature and requirement for the other.

6. Inherent in the system's design is its capability for improving itself. Perhaps a major defect in the implementation of educational innovations, especially in the area of individualization, has been the lack of the cumulative attainment of knowledge--on the basis of which the next innovation is better than the one that preceded it.

Despite the advocacy of such models as those just discussed, the literature confirms the fact that to date the principal emphasis has been on process rather than on product evaluation. One has only to scan the criteria used for evaluation by innumerable schools and agencies to realize this fact. Norman Harris,[4] writing in 1964, grouped a long list of important guidelines for evaluation into the following program categories: 1) meeting community needs; 2) administrative "climate" and organization; 3) guidance placement and follow-up; 4) instruction and curriculum; and 5) facilities and equipment. Even in the accreditation of vocational education this is the tendency, as John Stanavage of the North Central Association indicated at a recent meeting in Chicago when he said, "We never go into a school without trying to evaluate each program. But I would have to concede that we are looking at process and that we can't be confident of the validity of evaluation."

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[4] N. C. Harris, Technical Education in the Junior College (Washington, D.C.: American Association of Junior Colleges, 1964).

Implicit in Dr. Stanavage's statement and in those of many other individuals is the opinion that evaluation should be based more on product than process. This opinion was also expressed by Moss when he wrote:

> One of the most critical aspects of program evaluation, and the one which has thus far probably received the least attention, is the identification and measurement of the program outcomes which are to serve as evaluative criteria. Everyone affected by evaluation, and that is all educators, must be concerned with developing as complete an array of relevant potential outcomes as possible for use by evaluators.[5]

Note that Moss refers to two components of evaluation: the identification of program outcomes (objectives) and the measurement of them. He later states that evaluative criteria should be in terms of outcomes instead of program characteristics and suggests several means including formative evaluation, expert and self-evaluations, follow-ups, experiments, interrupted time series, and regressional analysis.

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[5] J. Moss, Jr. Review of Research in Vocational-Technical Teacher Education (Minneapolis: Research Coordinating Unit in Occupational Education, 1967).

The most clear-cut conclusion to be drawn from the review of the various models outlined above is that there is need for a systems approach to the evaluation of occupational education. Perhaps more than in any other area of education--and especially at the post-secondary level where the mature student is more likely to move from training into employment--there exists the unusual possibility to establish a data collection system that sheds light on innumerable variables and aids in decision making. Both inputs and outputs can be measured, quality control can be effected, evaluation can be continuous and programs can be modified. Such a plan emphasizes the product approach but does not neglect the program approach.

A systems approach for use at the state level was developed recently by the Center for Vocational and Technical Education at Ohio State University.[6] In some respects the plan involves the use of a data describing program as well as outcomes, although it stresses the latter.

Figure 2 (pages 18-19) portrays the substance of the plan. The fact that the evaluation program starts with the formulation of goal statements and ends with the formulation of goal statements and ends with the evaluation of goal achievements should be noted. However, the process involves the reexamination of goals following the first round of evaluation and alternative strategies for achieving them.

Certain operational characteristics of the desired system are set forth as follows:

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[6] A System for State Evaluation of Vocational Education, Final Report, Research Series No. 58, VT011 235 (The Ohio State University, 1970).

1. Information which stresses program outcomes rather than processes.

2. Measurement of the effectiveness of efforts in achieving projected program goals.

3. Systematic feedback of relevant evaluative information to local schools.

4. Sufficient flexibility to permit individual states to modify system components without impairing the integrity of the system.

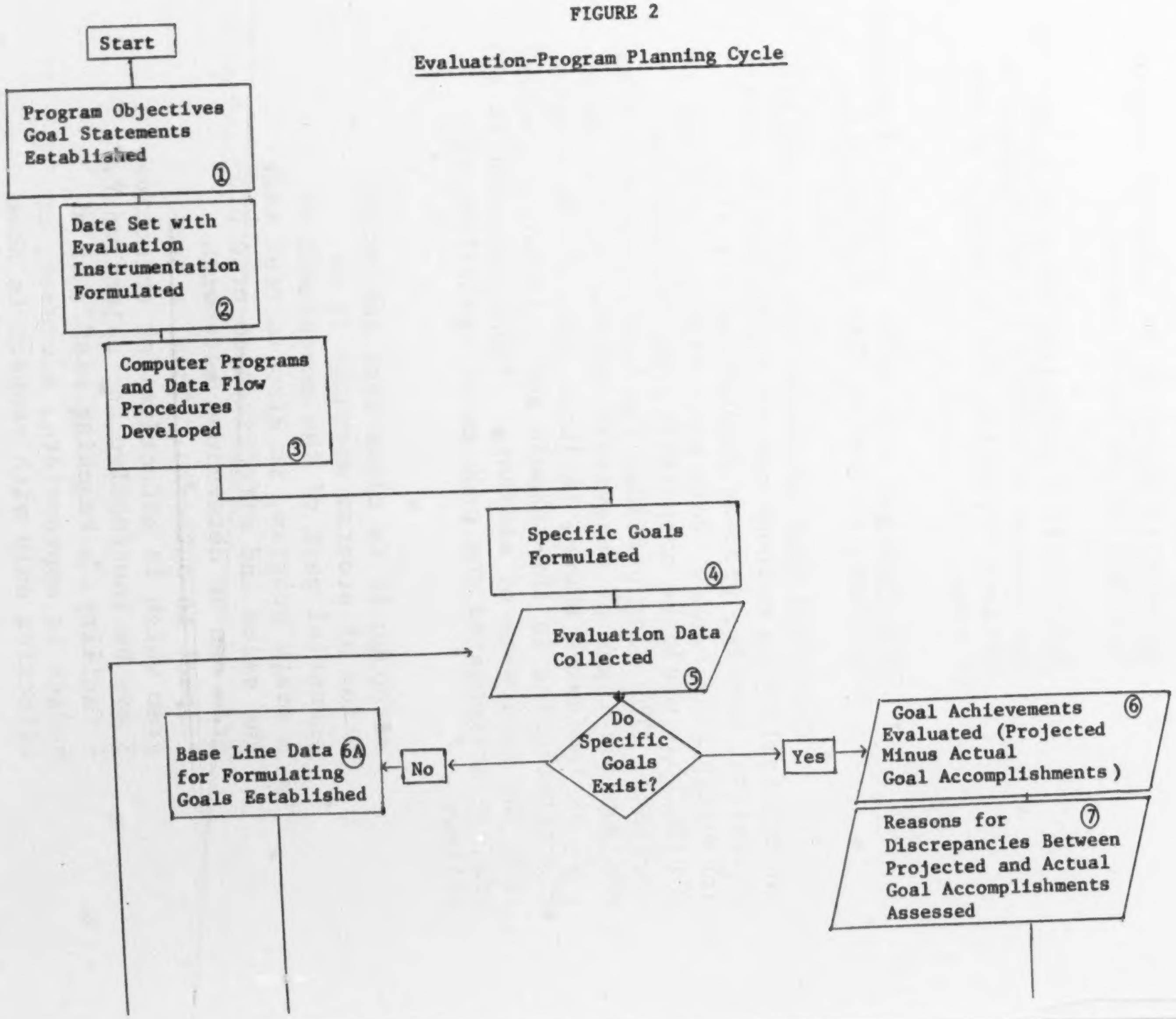
5. Articulation with other program planning systems, including PPBS and manpower.

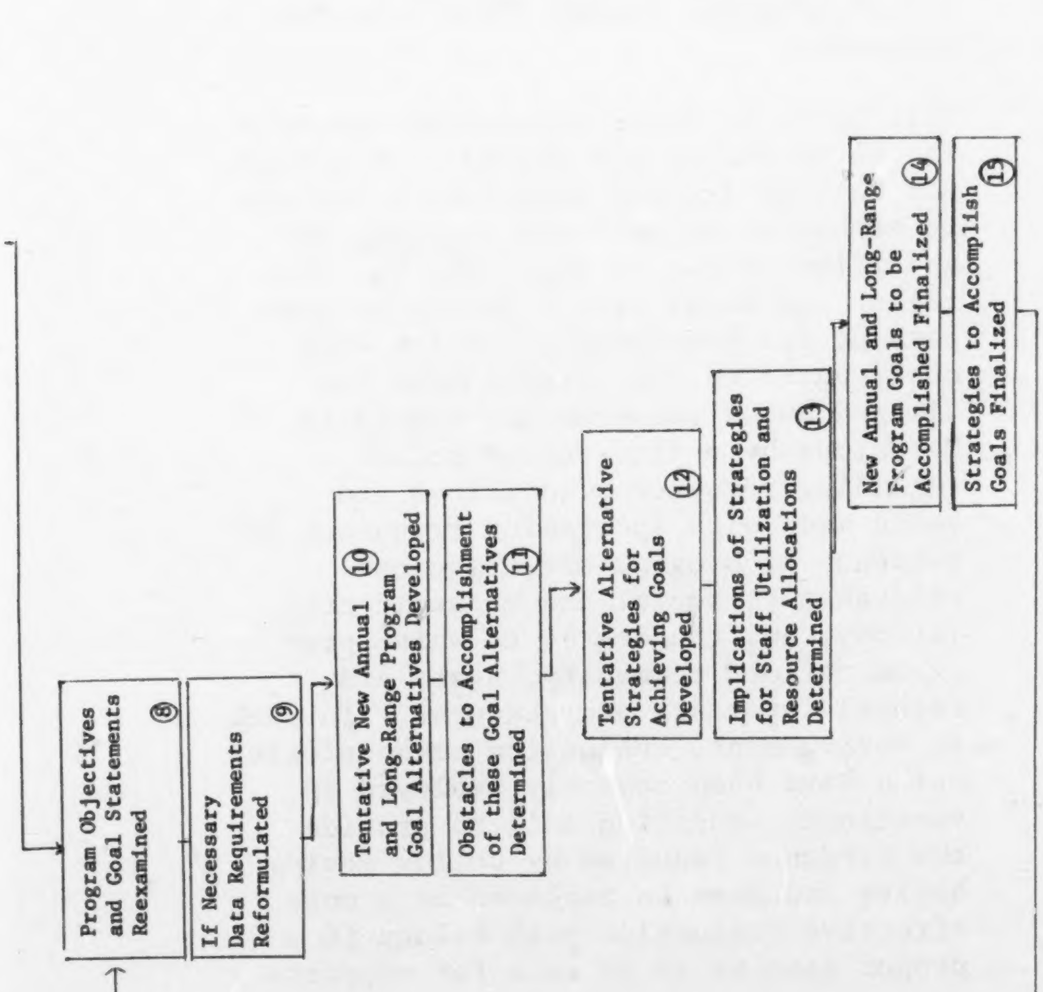
The group that developed the plan commented on two evaluation methods now in common use by state divisions, namely, process evaluation and all-inclusive data banks. Both were rejected in favor of a plan that would be compatible with the systems approach. The plan provides for data collection from the various types of vocational schools in the state and, as indicated above, includes data on the program characteristics in the schools and information gleaned from the follow-up of students. Those involved in the project articulated the problem of evaluation as follows:

> Although it is clear that the evaluation of program adequacy is an essential part of the assessment of a state program, it also is true that the value and effectiveness of a program can be determined only with respect to outcomes. Thus, a program which is effective for objective X may be ineffective for objective Y. A facility, a teaching staff, or a budget is appropriate, adequate, or effective only with respect to some

FIGURE 2

Evaluation-Program Planning Cycle


Start
Program Objectives Goal Statements Established ①
Date Set with Evaluation Instrumentation Formulated ②
Computer Programs and Data Flow Procedures Developed ③
Specific Goals Formulated ④
Evaluation Data Collected ⑤
Do Specific Goals Exist?
No
Base Line Data for Formulating Goals Established 6A
Yes
Goal Achievements Evaluated (Projected Minus Actual Goal Accomplishments) ⑥
Reasons for Discrepancies Between Projected and Actual Goal Accomplishments Assessed ⑦


Time Span
Program Objectives and Goal Statements Reexamined ⑧
If Necessary Data Requirements Reformulated ⑨
Tentative New Annual and Long-Range Program Goal Alternatives Developed ⑩
Obstacles to Accomplishment of these Goal Alternatives Determined ⑪
Tentative Alternative Strategies for Achieving Goals Developed ⑫
Implications of Strategies for Staff Utilization and Resource Allocations Determined ⑬
New Annual and Long-Range Program Goals to be Accomplished Finalized ⑭
Strategies to Accomplish Goals Finalized ⑮
Strategies to Achieve Goals Implemented ⑯

goal. Thus, evaluation of educational program effectiveness is meaningful only after it is known whether educational programs served their intended purposes.

This point is being emphasized strongly in the political and legislative arenas. Not only is federal legislation written to emphasize educational outcomes for specified groups of students, but education now finds itself having to compete at all governmental levels with other agencies and institutions for limited human and economic resources. Decisions by policy-making bodies regarding resource allocations are being made with increasing frequency of evidence of program effectiveness, relevance to social and economic conditions, and the degree to which programs reflect community, state and federal interests and concerns. In such an environment, evaluation methodologies which have been commonly employed in vocational education fail to provide the evidence required by policy-making bodies and must be replaced by a more effective evaluation methodology if a proper case is to be made for support.

I realize that an emphasis on the evaluation of product is not a new thought and that despite the long-term tendency of evaluators to look at program characteristics, there are many instances of attempts to find out how well the program functions in terms of performance. Examples of follow-up studies abound. My concern is that there are too few instances of planned evaluation that start with specific goals and objectives--even differentiated by targeted student groups--and then proceed step by step to systematically measure competencies developed during the program and performance on a job after placement. Included in the examination should be the relationship between manpower needs and the program as measured both by up-to-date occupational information on the one hand and the record of placements on the other. The evaluative process is a research effort that should be continuous, deliberate, and programmatic. Obviously, the evaluation program should be a cooperative effort involving faculty, administrators, and perhaps others on the staff with some one person or agency responsible for planning and executing it. Whether it be at the local or state level, it cannot be left to chance.

It seems, therefore, as if a new day in the evaluation of occupational education has dawned and that it is now incumbent on everyone involved to consider a systematic approach to the problem. One may also predict that with new methods of evaluating outcomes, and the ability to build data banks, we are closer to the day when cost benefit analyses can be made of our occupational training programs. Jacob Kaufman[7] has recently written on this point.

A project that should eventually yield assistance in making such analyses is the WICHE-MIS (Management Information Systems) program. It is also significant that vocational education is now one of five targeted development and research areas of the U. S. Office of Education. Beginning in fiscal year 1972 and for four years thereafter, the National Center for Educational Research and Development (NCERD) plans to fund a number of projects in program planning, management, and evaluation systems and techniques as they apply to vocational education.

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[7] J. J. Kaufman, "Cost-Effectiveness Analysis as a Method for the Evaluation of Vocational and Technical Education," Journal of Industrial Education, 6 (1969).

Problems and Issues Pertaining to Evaluation of Occupational Education

A number of problems and issues bear on the evaluation of vocational education. The first relates to the very nature of vocational education and to the difficulties of conceptualizing it in a changing society. As a nation we have a great diversity of opinion about what occupational training really is or should be. There are disagreements as to its content and the degree of specificity that should characterize it. We vary tremendously in our ideas about the development of skills versus the development of general competencies. We differ in our thoughts on the optimum length of training programs. We worry in varying degrees about the problems of occupational obsolescence. These common concerns are relevant to this discussion in that if evaluation systems are to be devised, we have to be fairly sure of what it is we should be evaluating. Presumably, each institution is privileged to conceive the desired nature of its own program and to evaluate accordingly, but it must make sure that the evaluation strategies consider the rationale that led to its program characteristics.

A related problem centers around the difficulties in ascertaining the objectives of occupational programs. It is easy to talk about goals, but considerably more difficult to articulate them. Furthermore, there is always a question of whether occupational programs should be designed primarily to prepare workers for entry jobs or, once the individual is employed, for advancement in the world of work. To the extent that the institution makes a distinction between these two possibilities, so then must this be clear in the way objectives are stated and the evaluation strategies are planned. It is obvious that goals must be specific and complete; otherwise, they cannot be measured. Yet Glaser has said that if such outcomes as complex reasoning and open-endedness are desirable aspects of human behavior, they need to be recognized as assessable goals. And such outcomes may indeed be important even in vocational education![8]

Perhaps one of the most difficult tasks encountered in ascertaining objectives is that of articulating differences in potential outcomes among students with varying characteristics. With more frequency, the literature and the legislation pertaining to vocational education make references to targeted groups of students. We are all aware that post-secondary institutions are being called upon to accommodate greater numbers of "new" students, who are of widely varying backgrounds in respect to age, socio-economic groups, motivations, and abilities. As a result, federal and state governments will probably increasingly insist on quite specific objectives for special targeted groups of students. To the extent that this is so, there are obvious implications for evaluation techniques.

A third problem of a different order is that of evaluating programs designed primarily for retraining purposes. If all the prognostications concerning job obsolescence come true, and if the average worker is called upon to change his way of making a living several times over the period of his gainful employment--or at least periodically to upgrade his skills--then occupational training programs will increasingly be involved with retraining as opposed to initial pre-employment training. Here the task of evaluation will be even more difficult since both the objectives and the trainees will vary greatly. Many institutions will be involved with both pre-employment and retraining, thus their system for evaluation will become more complicated.

Several references have been made here to the importance of evaluating a program in terms of how it meets manpower requirements. Related to this is the extent to which it meets other social needs, especially whether it attracts and serves a requisite number of students from targeted subgroups of the population. Such a criterion is becoming more important. A program may be assessed in terms of how well it serves its enrolled students but obviously if students who should be enrolled are not attracted to it, a link is missing. Thus any system must take this factor into consideration as it assesses its total program.

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[8] Ibid.

External Evaluation

So far we have talked mostly about strategies for internal evaluation. Our discussion, however, would be grossly incomplete without mentioning external evaluation. Legislation already enacted mandates an increase in evaluation activities by state agencies responsible for federal and state funded programs. It would seem that close working relationships between state and local bodies could result in the proverbial "killing of two birds with one stone" whereby many of the data needed by the institution could be part of a state's effort to evaluate its program based on a systems approach.

Another and more complex problem related to external evaluation is found in the accreditation of occupational programs. Everyone concerned with occupational education at the post-high school level is familiar with the problems of accreditation. The fact that institutional eligibility for receiving federal aid for occupational programs or for serving students who are financially assisted by the Federal government is based on accreditation, makes such problems as the following all that much greater:

1. The wide discrepancy in criteria used by regional associations to evaluate occupational training.

2. The fact that not all post-secondary institutions are eligible for accreditation by regional associations.

3. The growing involvement of various professional associations in the accreditation of specific occupational programs with the consequent confusion between institutional and program accreditation.

These and other problems were discussed at a meeting last spring by the Education Commission of the States, where attention was called to a need for greater flexibility in the accreditation of occupational programs and to an increasing emphasis on their results. More than a year ago, the National Commission on Accrediting created an interim council on accreditation of occupational and specialized education. In May 1969, this council proposed that each of the regional associations establish a separate commission for the accreditation of such education. The regional associations tended to resist the suggestion, although vocational educators generally seemed to favor it. Thus, at this time, it appears that there is much yet to be accomplished before the regional associations have perfected a viable means of accrediting this segment of education.

Moreover, the controversy between the regional associations and the various professional organizations that accredit individual programs is far from settled. In a study of this problem conducted at the Berkeley Center a few years ago, we came to the conclusion that in many ways such agencies serve a useful purpose. In our final report we said:

> There exists a great need to devise a methodology which allows each to facilitate the other. Perhaps one hope lies in the concept of cooperative activity,

> which would give institutions the opportunity to derive the benefits of assistance and support from teams of professionals supplied by the specialized agencies, while maintaining a total institutional commitment under the supervision of peers representing the regional association.[9]

There should be ways by which institutional evaluation of vocational programs and accrediting efforts by various outside agencies can complement each other. As duplication of effort is costly in time and money, it should be the goal of all involved to work toward that end.

Possible Directions Ahead

Assuming that technical vocational education at the post-secondary level is to remain an important element in the American educational system, we can speculate on some possible directions the evaluation of it will take in the years immediately ahead.

As expressed and implied in these remarks thus far, there is almost certain to be a move toward highly organized systematic approaches to evaluating occupational training. To develop such a system, or to modify an existing one for local use, would seem to be an exciting venture. It would provide an opportunity to use new and modern techniques in assessing both inputs and outputs so that evaluation would be continuous and change could be based on objective data.

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[9] L. E. Messersmith, & L. L. Medsker, Accreditation of Vocational-Technical Curricula in Post-secondary Institutions (Berkeley: Center for Research and Development in Higher Education, 1969).

What are some other probable directions? For one thing, like all other facets of education, occupational training will increasingly be confronted with the concept of accountability. Despite the current overuse of the term, the emerging notion is that schools and colleges must become more responsible for fulfilling the explicit and implicit missions they undertake. The question arises as to whom accountability is owed and while, generally speaking, educational institutions are responsible to the people who support and control them, their residual or basic responsibility is to the students who attend them. Accountability in education is difficult to define but after a thorough discussion of it, Morphet[10] et al say: "Accountability thus must now be defined as an assignable, measurable responsibility to be fulfilled under certain conditions and within certain constraints." Since the proof of the training is in what students learn, we are likely to see a move on the part of mature students and the public to look critically at occupational training ventures that do a poor job at what they purport to do.

Such a trend could even go so far as to establish contracts with students or certain agencies to deliver...or else. Increasingly, this procedure is being subjected to experimentation. The area of vocational education may prove to be a likely field in which this practice will make headway, especially since so many proprietary industrial-type organizations are offering vocational training.

A possibility of a different order is that emerging manpower demands will include a new list of worker capabilities over and beyond the skills that are commonly the targets of training. This is not a new thought, of course. For years, the schools have pondered on how they could develop such abstract qualities as initiative, adaptability, loyalty, inquisitiveness and many other such attributes. But the period ahead will be subject to great social change and it may be that development of the individual as a person will become as much a part of vocational training as his manual or professional skills. To the extent that this is so, evaluative techniques will need to be modified to measure more subjective outcomes. And this will not be easy.

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[10] "Evaluating Education in a Changing Society," Emerging State Responsibilities for Education, ed. by E. L. Morphet (1970).

The list of possible future directions could be expanded indefinitely. But even those we have mentioned portray the need for an imaginative approach to evaluation of the type with which we are concerned today. If, up until now, the assessment and updating of occupational training at the post-secondary level has been somewhat haphazard, a new direction is mandated by a changing society. A direction in which resource allocations are based more on demonstrated effectiveness than on subjective judgment and in which the expectations of the beneficiaries of education--both the public and the students--are reckoned with as never before.

COMMENTARY ON DR. MEDSKER'S PAPER

John Leathers
Director, Altoona Campus
The Pennsylvania State University

I believe we must ask ourselves, evaluation within what context?

The "summons to accountability," as WICHE[1] termed it, being served on American higher education is affecting all segments of education, including post-secondary occupational education. Accountability demands selectivity and selectivity requires the clarification of institutional purposes and an ordering of priorities. No institution can be all things to all people nor should it try or want to be.

It seems to me the strategy for evaluation for any one institution should begin and end within the context of that institution's self-professed functions and the roles it purports to play. The constant clarification of institutional purpose and policy must precede any intelligent allocation of resources.

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[1] Ben Lawrence, George Weathersby, and Virginia Patterson, eds., The Outputs of Higher Education: Their Identification, Measurement, and Evaluation (Boulder, Colorado: Western Interstate Commission for Higher Education, July 1970), p. 2.

With this premise, a framework for evaluation could evolve as follows:

1. You must have a clear understanding and devotion to the defined functions and avowed purposes of your institution. When you appoint a new professor you frequently "hire" a new curriculum. When you appoint a new administrator, you may "hire" a new charter. Constant clarification of institutional purposes is a must.

2. You must develop and maintain a keen sense of awareness of the roles your institution expects to play and also be sensitive to the roles others may expect it to play.

3. Ask yourself the following questions:

    a. What needs to be done?
    This will often require the perception of needs not yet apparent to the general public. There should be a delicate blending between following the market and creating new manpower needs.

    b. What are we going to try to do and on what level?
    The designation post-secondary occupational education means different things to different people at different times. For example, does post-secondary infer that the program is offered chronologically after high school or does it mean that the level of difficulty is beyond high school?

    c. How should we do it?

4. Do it!
    a. Are we actually doing what we set out to do?
    b. Are we doing it well?
    c. Can we do it better?
    d. What needs to be done?

This of course leads you back to further consideration of the institution's functions and roles, and completes the cycle of the procedure to be continuously repeated.

The so-called "process inputs" and "product outputs" are so interwoven that it is apt to be a futile exercise to attempt to isolate one from the other. The great debate about the chicken and the egg may go on forever but there can be little doubt that institutional process precedes institutional product. If the process is soundly conceived and deliberately implemented the chances that a good product will evolve are greatly enhanced. However, we must also be mindful that human variables are such that an individual "good product" might happen in spite of the process and not because of it.

"Product" in its earliest stages need not be considered external to the process. The product begins to emerge when the first word is spoken in the very first class. Consequently, evaluation of the product should also begin then and not be postponed until the student is placed in a practicum situation or on his first job. In my judgment, it is unthinkable that a program could be implemented without deliberately planning and allocating funds required to carefully evaluate the student in the practicum and the graduate on the job.

In addition to those references discussed by Dr. Medsker, there are a few other sources that come to mind as being worth checking, especially to the newcomers to the field such as I. The American Society for Engineering Education has provided effective professional guidance for years in the evaluation of technical curricula. Their 1962 edition, Characteristics of Excellence in Engineering Technology Education[2] sets forth a good basic approach that with revision could possibly be useful in other disciplines. It was helpful to me, for example, just to be reminded that the level of a program is determined by its objectives, and the quality by how well it achieves these objectives. They also very simply point out that some technical curricula intend to cover materials at a level very near to that of an engineering college and others at approximately the same level of difficulty as the secondary school. The point of my emphasizing this now is that each of us must determine the level of our programs early in the planning stage and certainly before the process inputs are considered.

The 1969 report of the Engineering Council for Professional Development[3] is a current reporting of that organization's efforts concerning evaluation, accreditation and so on. Also, the Technical Institute Division of the University of Texas at Arlington[4] has produced a one-page illustration of an engineering occupational spectrum ranging from the practical to the theoretical. It also highlights the wisdom of an early decision regarding the level of difficulty of each program.

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[2] American Society for Engineering Education, Characteristics of Excellence in Engineering Technology Education (1962), pp. 13-14.

[3] Engineer's Council for Professional Development, 37th Annual Report for the Year Ending September 30, 1969 (New York).

[4] Technical Institute Division, University of Texas at Arlington, Occupational Spectrum.

One other resource that should be mentioned is the 1970 publication by WICHE, The Outputs of Higher Education,[5] which is certainly one of the latest and most comprehensive treatments of evaluation within higher education. Dr. Medsker is a contributor to that publication.

If we are going to fulfill the missions of our institutions effectively, efficiently and with pride, we must evaluate ourselves and our programs critically and continuously. Evaluation procedures taken out of perspective can become a sort of mystic all of its own. Evaluation cannot be permitted to become an end in itself, but rather it must serve as a means to the end of better teaching, an improved process and products of the highest quality.

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[5] Lawrence et al, eds. The Outputs of Higher Education.

COMMENTARY ON DR. MEDSKER'S PAPER

Raymond A. Pietak
Provost, Community College of Philadelphia

Introduction

Dr. Medsker's provocative paper does compel one to carefully analyze his own philosophical position concerning the evaluation of occupational programs. He has most certainly incorporated in his paper many of the significant elements of this critical and timely subject in education.

As a reactor, I will exercise my prerogative of reacting to what interests me in Dr. Medsker's paper. As a matter of fact, I do plan to introduce other information, hopefully, in an attempt to reinforce what he has said and to cast further light on this most interesting and challenging area.

My remarks will be divided into at least three areas and represent the thoughts of an administrator who must be considered a generalist as opposed to being a technical or occupational specialist. The first area will concern itself with a conceptual or theoretical approach to evaluation. The second area will briefly describe our own attempts at the Community College of Philadelphia to systematize the ongoing evaluation of occupational programs. I would categorize our own attempts as being sincere, interesting, highly educational and time-demanding! I would not say they are all-encompassing in terms of the model that I will initially describe although many of the features of this model are present.

The third area will briefly review some of the evaluation techniques that now exist and are used by many of us in our work. They are offered to merely illustrate what the literature has been describing recently and to point out that evaluation has been taking place in occupational education. Judgment as to their efficacy will not be rendered. This must be individually done and based on one's own individual experiences.

Evaluation Theory

Dr. Medsker's plea for a more thorough, systematic approach to evaluation with the primary emphasis on "product" instead of on "process" and his description of several models leads me to observe that one of the questions in education that is still perplexing and challenging many of us is the development of a theory of evaluation that would:

1) provide a conceptual scheme for classifying evaluation problems or areas;
2) identify the data, means of analysis and reporting procedures that may be used;
3) provide a system of guidelines that would assist us in determining what evaluation procedures and techniques should be used in certain cases.

Ideally the propositions presented in a theory of evaluation should enable us to predict the appropriateness of utilizing various evaluation strategies within a system. Fortunately, the Center for the Study of Evaluation at UCLA has made some initial progress in this direction. I would like to present some of their thinking to you, since it seems to me that their theory development has incorporated much of what Dr. Medsker considers desirable.[1]

They prefer the following definition of evaluation:

> Evaluation is the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision-makers in selecting among alternatives.[2]

Their definition of evaluation is based on the following assumptions:

1. Evaluation is a process of gathering information. It is their contention that past definitions of evaluation were inadequate since they did not cover the full range of activities requiring information.

2. Information collected in an evaluation will be used mainly to make decisions about alternative courses of action. Thus the method of information collection and the analysis procedures must meet the needs of those involved in the decision process.

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[1] The evaluation theory presented in this paper is based on work completed at the Center for the Study of Evaluation at UCLA and published in an article by Marvin C. Alkin, "Evaluation Theory Development," UCLA Evaluation Comment, 2, 1 (October, 1969), 2-7.

[2] Ibid., p. 2.

3. The presentation of evaluation information to the decision maker should be in a form that is highly understandable.

4. The evaluation procedures utilized will depend on the decisions required.

The center staff maintain that evaluation must take into consideration the ultimate decision-making functions to be served, as well as the nature of the specific problem or situation under analysis.

The definition and assumptions stated above are closely related to the decision-making process, which leads to a consideration of the types of educational decisions requiring evaluative information. The development of a decision-oriented classification of the various types of evaluation has followed from this thinking. Five areas of evaluation may be identified:

1. Systems Assessment --evaluations necessary to secure information concerning decisions relating to the state of the system.

   By the way, a sub-system assessment is possible. In this case, the charge would be to determine the present status of a specific objective and related objectives of a given instructional program.

2. Program Planning --those evaluations that will assist the decision maker to make planning decisions. He must have sufficient information to be able to select among alternative processes the one that will eventually accomplish his goal.

   This process takes place prior to the implementation of the program.

3. Program Implementation --this evaluation will tell us whether the program was introduced in the manner it was intended and to the group for which it was intended.

4. Program Improvement --information secured as a result of evaluation that permits us to modify a program, if necessary. It is obtained during the course of a program and tells us how the program is functioning, how enroute objectives are being achieved, and what unanticipated outcomes are being produced.

5. Program Certification --information secured as a result of evaluation that permits the decision maker to make judgments about the worth of the program and its potential generalizability to other related situations.

According to the author, the evaluation areas outlined above seem to represent a growing consensus among a number of people engaged in the study of evaluation.

I submit that the foregoing appears to present to us a workable, although sophisticated model for the development of evaluation in occupational programs. It appears to provide for process, product, varying admission levels and would appear to place our efforts in a favorable light as we further attack the problem of federal funding. What's more, it has the option of either considering a total system or an individual program.

Community College of Philadelphia

At the Community College of Philadelphia prior to developing our 28 occupational curricula and options, we went through the process that is normally accorded the introduction of new curricula. Community needs and student needs were assessed. Student interest was determined. Advisory committees were formed. Curricula were formulated. Positions for graduates were tentatively assured. Faculty were involved throughout the process. If I have missed a step, it is not because it was not done but simply because I have not listed it. This was the initial introduction of new occupational curricula. Obviously, as those experienced in program development know, continuous review must take place. In order to systematize this continuous review, we devised a Career Curriculum Evaluation Form, which was to be completed by concerned faculty under the leadership of our department heads and division directors. The goal of the form was to carefully analyze each given career curriculum and its specific elements. For example, we asked that the following headings be completed:

I. Name
II. General objectives of curriculum
III. Specific objectives of curriculum
IV. Listing of courses by career specialty category, related or supporting course category, and general education category
V. Relationship between each specific objective and specific courses in the curriculum.

The intent of this task was to justify course inclusion based on a specific objective important to the curriculum. The categorization of the courses was an attempt to create a taxonomy for thinking purposes.

Other questions on the form included:

VI. Job abilities or skills a graduate can perform upon graduation.
VII. Job titles (entry positions) to which a graduate can aspire, to include salary ranges.
VIII. Selection criteria for entrance into program.

What we were doing here was actually reassessing the program based on some current input from our faculty. Many people refer to this as the "continuous" segment or element of curriculum development. Needless to say, some changes in the curricula were brought about as a result of this process.

Our next project, which we hope to develop this year, is a follow-up study of our graduates and their employers. Working with interested faculty, we anticipate developing, testing and modifying a questionnaire and other techniques to be used in this follow-up study. This next step will enable us to view what Dr. Medsker refers to as the "product." For, as he has implied and I do believe it, the "process" method cannot be separated from the "product" approach.

One thing has struck me as I have analyzed this whole area of evaluation -- what we are not doing is significant! And this definitely applies to my own situation.

Current Evaluation Techniques

The third part of my presentation is designed to briefly review existing evaluation techniques as reflected in the literature.[3]

Among them we have graduate interviews; career follow-up studies; achievement testing; state and national licensing examination; industry advisory committees; systems approach cycle; accreditation as an evaluation technique; self-initiated evaluation; personality change as a result of occupational education and evaluation; evaluative criteria; and cooperative education programs. I am sure that other techniques exist that have not been mentioned, but this does give us an idea of those developed and in use.

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[3] Arthur E. Bruhns, "Evaluation Processes Used to Access the Effectiveness of Vocational-Technical Programs," (Seminar Paper, UCLA, December 14, 1968), pp. 5-12.

Conclusion

I will close in saying that I agree with special report and recommendations by the Carnegie Commission on Higher Education of June 1970 that said:

> The Carnegie Commission recommends a single program of institutional accreditation for two-year colleges and the elimination of accreditation of specialities. The contribution of professional associations in the evaluation of specialized programs should be made through cooperation with the regional accrediting bodies.[4]

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[4] The Open-Door Colleges, Clark Kerr, chairman (New York: McGraw-Hill Book Company, 1970), p. 49.

FACULTY EVALUATION: A PROJECT REPORT

James L. Evanko
Dean of Students, Allegheny Campus
Community College of Allegheny County

Why Evaluate

Upon reviewing papers by McKeachie,[1] Boyer,[2] and Long,[3] one can synthesize the reasons for faculty evaluation and define them in terms of three major objectives.

The first objective is the improvement of teaching and the educational process. This is, in my opinion, the most important. This objective can be evaluated in terms of the instructor's ability, the course objectives and the classroom environment.

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[1] William J. McKeachie, "Student Ratings of Faculty," American Association of University Professors Bulletin (Winter, 1969).

[2] Marcia Boyer, "Teacher Evaluation: Toward Improving Instructors," ERIC Junior College Research Review, 4 (January, 1970).

[3] Louis Long, "Why Evaluate" (paper presented at the 22nd National Conference on Higher Education, Chicago, March 6, 1967).

The second objective is to use the results for administrative purposes such as reappointment, promotion, tenure, course assignment, merit raises, curriculum and course revision, to develop faculty seminars, and so on.

The third objective would be to fulfill student needs such as selection of course and instructor, participation in course development, participation in developing media usage and improvement in faculty-student interaction.

Developing the Instrument

If one accepts the three general objectives as sufficient reason to proceed, the next step is to develop a set of instruments. One can, of course, re-invent the wheel or take advantage of the works of others.

According to McKeachie,[4] good student-rating scales and instruments are available at Purdue, the University of Washington, Miami University, Minnesota, Michigan and a number of others. Boyer[5] also lists a number of studies at community colleges. The publication of Cohen and Brawer,[6] "Measuring Faculty Performance," is based on the premise that one must study instructors, students, and the learning process together for the study to be most meaningful.

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[4] McKeachie, op. cit.

[5] Boyer, op. cit.

[6] A. M. Cohen and F. B. Brawer, Measuring Faculty Performance (Washington, D.C.: American Association of Junior Colleges).

At the Allegheny campus of the Community College of Allegheny County, the thought of faculty evaluation had been considered since the college's beginning. It was not until the beginning of the third year that time and circumstances were appropriate to institute the seeds to begin the process. The Faculty Association was then asked to begin the development of an evaluation procedure and instruments. By the beginning of the fourth year, a student questionnaire had been developed and tested by a small group of faculty.

Time started to press upon the administration to have a procedure and instruments for the next year, which was the fifth. An administrative decision was made that the dean of faculty would form and chair a committee composed of three other administrators and three faculty selected by the Faculty Association.

The committee was convened, reviewed the literature, and developed the procedure and basis to develop the instruments. A four-level evaluation by students, faculty-self, department head and divisional assistant deans was set up. It was also decided that the student and faculty-self instruments were to be the same so that there could be a comparison of student and faculty perceptions of each item.

The research of Perry[7] of Toledo University was used to develop the basic instrument for students and faculty-self evaluation.

Perry used a jury group to establish 60 criteria behaviors of faculty from a list of 13,643 statements on teaching behaviors written by students, alumni and faculty. The same list in original rank order was submitted separately to a representative sample of students, all full-time faculty, all department heads, and all academic administrators.

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[7] Richard R. Perry, "Evaluation of Teaching Behavior Seeks to Measure Effectiveness," College and University Business, 1969.

Each individual was asked to note each of the behaviors on two counts. First, to rate each item's importance in terms of critical, above average, average, below average or no importance. Secondly, each individual was asked to name the person best capable of making the judgment about each behavior -- student, faculty, department head or assistant dean.

The data was collected and processed. The rank order correlation of the 60 items at Allegheny Campus compared to Toledo University was +0.902. The next decision was that 60 items was too long. The assistant deans and I met and selected approximately the top 30 items as the ones to be used. These were then compared to other outside available instruments and the original Allegheny Campus student instrument. As a result of this process, a 32-question instrument was developed.

At the same time, the department heads developed a subjective-objective form and a suggested list of techniques for faculty evaluation. The assistant deans decided on a subjective letter to cover the areas of teaching, other college activities, and outside activities.

Implementation of the Procedure and Instruments

In that the highest immediate priority was for tenure evaluation, the procedure and instruments were set for the 27 faculty that were eligible. A time schedule statement that defined the procedure was sent to all concerned. Then Applications for Tenured Appointment were sent to the eligible faculty. Upon receipt of the signed applications, the faculty member was given his self-evaluation form to complete. When this was turned in, the department head was given his evaluation form to complete on his faculty, and the faculty were given the student evaluation forms for their sections to have completed and returned. The data was collected, compiled and processed in a computer. All of the evaluation forms were collated and sent to the dean of faculty, who reviewed the data and recommendations. In appropriate cases, the faculty were then recommended to the campus president for tenured appointment. They will be reviewed by the campus president, system president and Board of Trustees in terms of granting a tenured appointment for the coming year.

The Future of Faculty Evaluation

With small revisions, the procedure and instruments will be used in the following month for the remaining faculty in terms of promotion, retention and faculty improvement.

There are studies available that validate faculty evaluation at the student level as noted in the papers of McKeachie,[8] Boyer,[9] and Roueche and Hurlburt.[10] Many faculty fears could be put to rest if this type of research is collected, printed and distributed to the faculty. McKeachie[11] notes that research shows the following: instructors rated as excellent by the student are still rated as excellent when the student becomes an alumni (opinions rarely change); the instructor's personality does not seem to enter into the ratings; and the severity of grading does not seem to affect overall instructor ratings. Certain factors do affect the ratings such as class size, degrees of the instructor, and background of the instructor. These are also available in the literature.

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[8] McKeachie, op. cit.

[9] Boyer, op. cit.

[10] John E. Rouche and A. S. Hurlburt, "Research on Junior College Teachers," ERIC Junior College Research Review, 2 (March, 1968).

[11] McKeachie, op. cit.

Roueche and Hurlbert[12] report that at St. John's River Junior College, the student ratings changed significantly the second year. This was a result of faculty taking the ratings seriously and improving their teaching techniques.

An independent study by McKetta[13] gives a singular example of what can happen when teaching becomes a strong focus of the faculty. In the United States, during the period from 1963 to 1968, an average of 63 percent of the undergraduate engineering students were in good standing at the end of the spring semester. As a result of a faculty and administrative endeavor to improve teaching, the University of Texas improved retention in good standing from 57 percent to 88 percent of undergraduate engineering students during this same time period. This included grades for all courses including those in liberal arts. Admission standards for freshmen remained the same over this period. Also during this period, for the faculty, published papers increased two-fold, book publications increased four-fold and research dollars increased six-fold. The methods used to improve teaching were not made known in the article except that the desire to improve teaching was strong with both the faculty and administration of the engineering school.

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[12] Roueche and Hurlbert, op. cit.

[13] John J. McKetta, "Measuring Teaching Effectiveness," Engineering Education (December, 1969).

Some positive measures will have to be taken to utilize the student and faculty self-evaluation forms as a viable tool to help weaker instructors improve their teaching. This can be accomplished by working with the department head, assistant dean, peer groups, or perhaps a faculty group of expert senior teachers.

The interrelationship of instructor-student-course needs to be more fully investigated. The instruments and procedures will have to be evaluated and updated in light of internal research and new external research.

STRATEGIES FOR ASSESSING TEACHER EFFECTIVENESS IN POST-SECONDARY OCCUPATIONAL PROGRAMS

Robert Wiegman
Dean, College of Education
Florida Atlantic University

Introduction

Schools and teachers have always been under attack because they represent both the finest hope that the nation's youth will be prepared to lead happier, more satisfying, more productive lives than their parents enjoyed; and our deepest despair because progress toward making a better life for each individual has been torturously slow. When man's dreams are frustrated, he thrashes about trying to find someone upon whom he can fix the blame for his shattered hopes, aspirations, and ambition. The schools are a beautiful target.

Some Gleanings from the Press to Set the Stage

In his message to Congress, the Honorable Richard M. Nixon said, "We have, as a nation, too long avoided thinking of the productivity of schools."[1]

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[1] Education for the 1970's Renewal and Reform, Message to the Congress by Richard Nixon, President of the United States, March, 1970, p. 6.

In Teachers for The Real World, B. Othanel Smith, Saul B. Cohen, and Arthur Pearl identify four areas to which education must direct its attention. They write: "Students must become well able to: (1) choose, perform, and enjoy a viable vocation, (2) exercise the complicated task of democratic citizenship, (3) engage in culture-carrying activities, and (4) engage in satisfactory inter- and intra-personal relationships."[2]

The literature contains many fine references on assessment of teacher effectiveness. Let me suggest some that you could profitably read and ponder:

> A. S. Barr. Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness. A summary of investigations. Dembar Publications, Inc., 1961. Madison, Wisconsin. 156 pages.
>
> ERIC. Junior College Research Review. American Association of Junior Colleges. Particularly, Volume 5, Number 1, September, 1970. "Trends in the Study of Junior Colleges: 1970," by Arthur M. Cohen and Edgar A. Quimby.
> Junior College Research Review. Hazel Horn, editor. ERIC Clearing House for Junior Colleges, Room 96, Powell Library, University of California, Los Angeles, California.
>
> The Assessment Revolution. New Viewpoints for Teacher Evaluation. Robert C. Burkhart,

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[2] B. Othanel Smith, Saul B. Cohen and Arthur Pearl, Teachers for The Real World, (The American Association of Colleges for Teacher Education, 1969), page 3.

Moderator-editor. National Symposium on Evaluation in Education. New York State Education Department, Division of Teacher Education and Certification. Buffalo State University College, Teacher Learning Center. 355 pages. (This reference has a very fine bibliography of books, articles, dissertations, and bibliographies.)

It is not the purpose of this paper to review the literature but these few references might be profitably studied by any of you who want to go into the subject more deeply.

Steps in Assessing Teacher Effectiveness

Step 1--Where do we begin in assessing effectiveness of teachers? I suggest that we begin with the selection of instructors. In talking with junior college faculties, I have started by asking, "When you were being interviewed for a position, how many of you were asked questions about your teaching ability? How about things that you would want to try in classrooms if you were free to do so? What you have tried in your classroom recently? With what results?"

Of the more than 500 junior college faculty members to whom I directed these questions, only a half dozen indicated that they had been asked any questions at all about their teaching effectiveness. Transcripts were studied, of course, to determine if the candidate had the required number of hours in the subject, and it was assumed that he would be a good teacher if he had a major in the appropriate area from a good university. To me, this is sad and says clearly how important we think teaching really is!

In our employment of faculty, I believe that the least we could do would be to have a personal interview before hiring any faculty member. During the interview we would form some judgments as to the candidate's ability to express himself; his command of the discipline which he was prepared to teach; his personal appearance (Is it really necessary that teachers in the occupational programs should dress and look like society's castoffs?); personality; interest in people; what he has read recently (I firmly believe that all teachers should be voracious readers); his feelings toward people; his ambitions. Perhaps we should set up a situation where he could demonstrate his teaching ability in the classroom either live or through films.

Step 2--Collect evidence about his performance in the classroom. Does he teach the students he has, or does he direct his instruction to a select few at the top or the bottom of the class? Does he vary his instructional procedures using lecture, independent study, discussion, demonstrations and reports? We learn by different methods and different approaches, and the emphasis should be on what the student learns. Does he stimulate his students or does he bore them to death? How human and understanding is he in his dealing with students? Do not misunderstand me, I do not mean here that we should have a mush-headed, bleeding-heart in the classroom. I firmly believe that the teacher must be a positive influence in the classroom at all times, that he must stand for something that is higher and better than the lowest common denominator in the class would represent.

Are the materials that he uses in adequate supply and up to date? Does he use equipment, tape recorders, overhead projectors, slide projectors, all the media that help a person understand? What is the attendance pattern in the class--is the absenteeism high? What is the classroom atmosphere? The tone? Does he involve students in planning and in assessing their own progress? Does he attract students to the program? Does he invite other faculty to visit his class and talk with them about the strategies which he is employing?

Step 3--Has he written out his objectives for the course in clearly stated terms so that the students know what will be expected of them? As I look at course and program and college objectives, I am impressed by how noble and lofty they are and how impossible it is to determine the extent to which we reach them.

I am reminded of one of my favorite stories about the contractor whom had fallen upon difficult times and was down to his last two employees--two young men who he liked equally well. Business fell off, and he was forced to let one of them go. He did not know which one to release so he went to the local junior college and talked with one of the counselors about his problem. The counselor said, "That's easy, just ask each one what he is making."

The contractor thought that was a good idea and went back to the job--called one young man aside and asked, "What are you making?" The young man said, "I am making $6.50 an hour." He then went to the second young man and asked, "What are you making?" The young man replied, "I am helping to build a cathedral where each man can worship in his own way and find peace and serenity."

I ask you, "Which young man did he fire?" The second one, because they were supposed to be building a garage!

Building a garage is a perfectly proper task, but in reading our objectives, you would think that we are all engaged in building cathedrals.

One of the promising developments today, as I see it, is in the area of performance-based objectives. Let us talk about such objectives for a few minutes. Thorwald Esbensen has written, "A performance objective is a description of an observable task to be performed by a learner to demonstrate that he has learned something."[3] He goes on to say that, "The basic reason for using performance objectives is that no matter what it is that teachers and students are trying to do within the framework of formal schooling, they need to be able to tell, as they go along, how well they are doing it."

This seems perfectly reasonable to me, and I am rather surprised to find that many teachers resist writing performance-based objectives. They say to me, "These objectives are too small, too narrow. We are teaching far more than we can express this way. You can write them in the cognitive area (things which can be observed and measured), but you cannot do it effectively in the affective domain."

I admit the reasonableness of these arguments. Writing performance-based objectives is difficult and time consuming, but I submit that, as President Nixon has indicated, we will be held more and more accountable for what we are trying to do in the classroom. The emphasis will be more and more upon the product that we are turning out. What is the student capable of doing when he finishes this part of his education? Teachers will be judged more and more on the extent to which students learn to do those things that we say we are teaching them to do, and less and less emphasis will be placed upon what we do in the hopes that something will result.

Let me suggest a few behavioral objectives in the area of occupational education to illustrate what we are talking about:

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[3] Thorwald Esbensen, Using Performance Objectives (Tallahassee, Florida: Office of Publications and Textbook Services).

Upon request, the student will describe the procedure for changing the oil and filter in an automobile. The description must include reference to the following steps in order: (1) Raise the car on the lift; (2) position the used oil receptacle under the pan; (3) remove plug; (4) let oil drain; (5) remove filter; (6) remove used oil receptacle; (7) replace plug; (8) put oil on seal of filter; (9) replace filter; (10) lower automobile; (11) put new oil in crankcase; (12) check for leaks.

A second illustration:

Given a quantity of 3/8" plywood, handsaw, hammer, woodfile, sandpaper, ruler and assorted nails, the student will construct a cube with a side of 8". All measurements must be within 1/16" of the specified size. The quality of the finish of the cube will have no bearing on the successful achievement of this objective.

A third illustration:

Given a flat-bladed shovel and trowel, the student will dig a trench 10' long, 1' wide and 1' deep. All measurements must be to the nearest 1/4". The student will have 45 minutes to complete this exercise.

A fourth illustration:

Given one gallon of latex wall paint, a roller, pan, sash tool, and 3" brush, the student will paint an interior wall 8' by 15' within one hour. Satisfactory achievement of this objective will be determined by a panel of three master painters. Ratings

> will be above average, satisfactory, or unsatisfactory. The student must achieve a rating of above average or satisfactory as determined by at least two of the three master painters.
>
> Can these be adequately measured?

Step 4--Assess the product of his instruction. First, can the student actually do what he was prepared to do? The behavioral objectives cited above could give us evidence on this point. There are other indices that we might also use. What is the employment pattern? Is the young man hired to do the job he was trained to do? Was he retained? Was he promoted? Did he change jobs? If so, to similar positions or to a different field?

Get some feedback from the students in follow-up studies. Do they continue further studies, independently or in other institutions? Do they continue to read?

Also secure feedback from the employers. Is he a steady worker? Does he do his job properly? Is he on time? Does he carry out his responsibilities voluntarily or does he have to be prodded? Is he trustworthy?

Step 5--The teacher's service to the college. Does he participate in the departmental meetings? Does he suggest new programs, better ways of doing things? Does he fight for his program, for facilities, for support, but accept with a reasonable amount of grace the financial restrictions within which he must operate?

Garrison, in his fine publication, *Teaching in A Junior College*, lists abilities that the junior college teacher must have and points to several indicators of a faculty member's effectiveness:

1. The nature and extent of a faculty member's effectiveness and activity in committee or other faculty work.

2. The faculty member's role in the initiation of student activities.

3. Publications, books, articles, speeches, monographs by the faculty member.

4. The extent of a faculty member's responsibilities as a student advisor.

5. The faculty member's ability to create and use teaching aids.

6. Innovations and experiments which the faculty member uses in teaching.

7. Receipt of grants for experimentation or further study by the faculty member.

8. The extent of the faculty member's participation in appropriate professional organizations.

9. The faculty member as an active citizen of the community.

10. The faculty member's activities out of school that are related to his professional growth.[4]

Step 6--The next and last step might be classified as general. Here we would look for evidence as to how the instructor provides for input from the field.

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[4] Roger H. Garrison, Teaching in A Junior College (Washington, D. C.: American Association of Junior Colleges, 1968).

Does he have advisory committees? Does he keep abreast of developments in his field through reading or consultations with practitioners? What are his contacts with students outside of class? Do his students contact the college voluntarily after they have completed the program and talk about what they had learned or failed to learn and what it meant to them? Does he talk with other faculty members in the lounge, in the hall, in their offices?

In conclusion, if we wish to improve instruction in our colleges the first order of business should be that we focus on that topic. How much time do we spend in our faculty meeting about improving instruction? Do we try to identify good teachers and reward them for their teaching ability? Do we show through our actions and through our talks with faculty that we regard teaching as important?

In 1969, I wrote:

> What kind of teacher do we need in the junior college? Certainly, one who has a good background in his field preferably with prior experience. Just as certainly, he must have had contact and be interested in the world about him. He must be widely read, have had many experiences, and be sensitive to the movements and changes in society. Hopefully, he is student oriented, and sensitive to the needs of students, and is concerned about meeting their needs. He should teach in the junior college because he has deliberately chosen this type of institution as the place where he can make his maximum contribution. He should be concerned about his subject, but he should be even more concerned about helping each student develop a state of mind which will nurture life-long learning, the ability to think, to make decisions, to reason, to adjust, and to adapt. He should realize

> that the subject matter he is teaching may become obsolete, but that right attitudes toward work, learning, and people will never be obsolete.[5]

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[5] Robert R. Wiegman, General Education in Occupational Education Programs Offered by Junior Colleges, (American Association of Junior Colleges, Washington, D. C. 1969), p. 24.

COMMENTARY ON DR. WIEGMAN'S PAPER

Eugene J. Kray
Associate Dean of Instruction
Community College of Delaware County

There are certain aspects of "the areas to which education must direct its attention" as defined by Smith-Cohen and Pearl, which Dr. Wiegman mentioned, that I believe are beyond the scope of the paper and possibly the overall goals of post-high school education.

It may very well be that students should be able to "exercise the complicated test of democratic citizenship ... engage in cultural carrying activities and ... engage in inter- and intra-personal relationships." These areas are certainly of interest to all men but do not lend themselves well to assessing teacher effectiveness in post-high school occupational programs.

I heartily concur with Dr. Wiegman's statements concerning the interviewing process particularly as it relates to teacher effectiveness and willingness to innovate. As an aside, there is a major university in Pennsylvania that rates its faculty on a 14-point scale, not one of which deals with faculty effectiveness in the classroom. I agree that too much emphasis is placed on paper qualifications. A factor that must be given major consideration particularly in occupational areas is the non-academic experience of the teacher in his particular field. In my teaching career, I have relied quite heavily on my business experience probably as much, if not more, than my academic preparation. Of course, it is not necessary to expand these clichés of relevancy and having your young faculty (in mind, at least) with their mod dress and long hair who reach some students just because of their external appearance.

A brief comment on the use of media. Although I strongly support the use of instructional media, I wonder whether the utilization in the classroom should be a vital portion of the evaluative process. Media, tape recorders, overhead projectors, and other materials are only valuable when they are used appropriately. How many of you have seen faculty who regularly have Monday morning at the movies? There are some instructors who can still teach in what we call the "standard style" and be extremely effective. There must be room within our system for idiosyncratic instructors.

The difficult goal in assessing effectiveness in any area of human endeavor is to establish clear objectives before the fact. If we are assessing the performance of a teacher, it would seem that Step 3 of Professor Weigman's proposal, that concerned with a statement of objectives, should be applied in the area of measurement of faculty effectiveness.

In the elementary grades, where we are concerned with the teaching of reading, for example, the objective by which an instructor could be rated might be that 90 percent of his students reach a minimum of grade level proficiency in reading as measured by external standardized tests. If an individual is to be held responsible for the product of his teaching, we must specify his area of responsibility as clearly as possible. You are well aware of the controversy that has been raised over major private corporations getting into the education business, particularly reading, on a basis that says: "Pay me only if I produce."

In vocational training, several criteria immediately suggest themselves:

1. The level of employment of students in the field for which they are trained immediately after completion of the training program. This may be difficult to achieve as a number of non-controllable factors enter in —-the projections on the part of individuals other than the teacher for employment in the field; decisions on the part of the students to enter military service or continue with their education may make the situation seem much worse than it really is.

2. Possibly a better measure of a student's experience in a vocational course would be to determine whether he can actually do what it was he was to learn to do. Our experience has shown these vocational courses to be tailor-made for behavioral objectives as opposed to something like English Literature. A statement of behavioral goals for a training program prior to entrance of the student into a training course makes it possible for us to determine at the earliest possible time what his levels of skill in the area of concern are before he begins to interact with the teacher. Pretests would have to be required. Post-testing will give us an idea of how successful the institution was if the post-test is clearly related to the originally stated institution objectives.

All of the above is not to imply that the evaluation of students after they pass through a program of instruction is the only measure of teacher effectiveness. However, if it is productivity that the public supporting the program is interested in, then such measure must be far and away the most important portion of faculty evaluation.

In Step 4, Dr. Wiegman touched upon a point that I would like to expand. He asked, "What is the employment pattern? Is the young man hired to do the job he was trained to do? Was he promoted?" All too often our programs are shortsighted. By this, I mean we cram technical specialty courses into our curricula and we never have enough. All too often we find after a short period of time that this student is either promoted or transferred to a totally unrelated position. What I am getting at is the need for a balance in any occupational curriculum with general education. In business, for example, we have moved in the direction of a core approach providing a balance of general education and general business courses in every curricula along with the specialty whether it be data processing, retail management, or secretarial studies.

With regard to a faculty member's service to the college, I would simply raise the question: What do you do with an outstanding instructor who is innovative, relates to his students, does a tremendous job in the classroom but could not care less about participating on committees, or attending meetings. I also might take exception with some of Roger Garrison's indications of faculty effectiveness, particularly those concerning publications, book articles, and the receipt of grants.

With regard to advisory committees as they affect the faculty, I believe the question should not be "Does he have advisory committees?" since this is usually an administrative decision as to whether they are to be implemented. A more important question, however, is "How effectively does he use advisory committees? Does he use them to keep abreast of what is going on, to open doors for students, to assist in curriculum improvement, to seek out sources of financial aid, to assist in the placement of students?"

In conclusion, I cannot stress strongly enough that post-secondary institutions with occupational programs are not so much teaching institutions as they are learning institutions. Administrators, business managers, purchasing agents and even teachers are only there to grease the wheel and make the instructional process function smoothly.

TEACHERS FOR POST-HIGH SCHOOL OCCUPATIONAL PROGRAMS

Herbert S. Eisenstein
Assistant Dean of Faculty, Capitol Campus
The Pennsylvania State University

The notion that teacher "effectiveness" can be evaluated more accurately through a series of assessing steps is an intriguing one. This approach to a concept of teaching, conveyed by Dr. Robert Wiegman's paper, suggests that elaborate performance check lists would enable the two-year college department head or administrator to measure a measurable activity. Assessment steps and check lists have a way of defining that which they are purporting to measure. The assumption seems to be that because that which is being taught in post-high school occupational programs is skill "writ large" (or technical skill "writ equally as large"), teaching that skill can be broken into component parts, susceptible to effectiveness measurement. We are apparently to be persuaded that learning a vocational skill and teaching a vocational skill are parallel activities each with analyzable sub-units. The precise effectiveness criteria in the latter will, therefore, guarantee the end result of the former. There are serious shortcomings to these assumptions. At least in the view of this writer, there are also serious implications.

Surely, those engaged in the process of learning have more in mind than the bland, superficial, four goals (paraphrased slightly) of Smith, Cohen, and

Pearl referred to in Dr. Wiegman's paper: vocational selection and happiness, democratic citizenship, perpetuating the culture, and satisfying human relations. Who freely chooses what kind of vocation and how does one enjoy it? How really viable is it? What does exercise in "democratic citizenship" mean to the student, the teacher, the worker in the machine shop, or the chairman of the board of a powerful corporation? And do we equate "culture-carrying activities" with maintaining the present distribution of power (the status quo)? Does "satisfactory inter- and intra-personal relationships" refer to an Associate Degree major in Industrial Chemistry who also happens to be a member of S.D.S., or the Black major in Construction Technology who is aware of the racial composition of the building trade unions in this country? Prescribing precise educational goals obviously has its difficulties.

There seems to be a connection between the orderly world to which, it was noted above, certain educators hope to adjust students, and the kinds of questions we are told it is important to ask prospective post-secondary school faculty. It should be noted that there is a distinction between asking a candidate what he has read and how much he has read. If a hiring administrator is convinced, as we are led to believe, that a voracious reader is already one leg up in the hiring game, the former is really not interested in the reading taste revealed by the candidate's insatiable appetite. Indeed, it is unfair to prescribe assessment of candidates on the basis of what they have read until the assessor openly states that he would not penalize the candidate for reading any kind of material. The questionsoffered as examples for screening candidates suggest the personnel office of a large corporation. It seems that the questions could very easily be used to advantage by a personnel manager: personal appearance, competency or skill, ability to express oneself, personality (does he fit?), attitudes, and ambitions.

Conventional competency in a given field is readily available. None of the previous questions assume that freedom is an important concept in the field of education. A teaching candidate who reveals intrinsically generated motivations instead of those based on fear of displeasing authorities understands the concept of freedom. Such a person would reveal his awareness that freedom is internal as well as external. But if one regards teaching as a process of freeing the student to learn, then one looks for free people. In addition to the basic standard competency, they are internally free and insist on a free environment. In the selection process, questions directed toward this quality are crucial. They can only be asked if the administrator has internalized the concept of freedom, and has incorporated it into an ongoing definition of education.

The next step (in which direction, is left to conjecture) in the assessment of teachers deals with classroom performance. The check list is large, including items that caution the teacher to teach neither up nor down, rate the use of audio-visual hardware and other materials, evaluate the extent of student self-assessment, as well as colleague visitation and consultation. However, Dr. Weigman's charge that the teacher "must stand for something that is higher, better, than the lowest common denominator in the class would represent" negates the possibility of the selected teacher actually subscribing to student-centered learning experiences. The advantage to ascribing qualities to the teacher role that project an image of hierarchical superiority is obscure in terms of gaining student participation and involvement. Teachers who are "higher," and "better," than the "lowest" quality present in the student class membership, must contend with two barriers to student learning involvement: the psychological distance between their teacher role and the students, and the teachers' own acceptance of the role thrust upon them. The barriers are self-imposed, as well as institutionally imposed; there is in this case consonance between teacher and institutional values.

Objectives, the third assessment step under review here, reflects the impatience of resource allocators, or today's decision makers concerning ambiguous payoffs for all those investments in the field of education. Accountability in education is a public official's motto. Those who engage in teaching, it is proclaimed, must define precisely what they are teaching. Then, those who are taught can have their accomplishments measured in order to determine the effectiveness of their teachers' stated objectives. Should the student come out poorly, either the goals are stated imprecisely, or the teachers' ability to implement these goals leaves a good deal to be desired. Surely this vision of education, while it gains in measurable accountability and, therefore, reassures resources allocaters that public services are received for public monies spent, represents the narrowest of visions. Yet, it is just these kinds of educational visions that make difficult the development of free environments within which liberating experiences sometimes referred to as "education" occur. The liberating experiences, also known as learning, are always away from ignorance and toward questioning. The necessary, but very insufficient part of learning called skill acquisition in post-secondary occupational programs (or any kind) represents, we are led to believe, that which is measurable. It is, therefore, that which can be utilized in evaluating teacher performance. But skill acquisition can occur in unimaginative and authoritarian lectures in the humanities as well as successive sub-units of mechanical skills the student is asked to accumulate.

Performance-based objectives are possible in both kinds of classrooms, and probably more conveniently applied in the latter. However, it is one thing to check a student's competencies in oil and filter changing, and quite another to encourage that same student to learn to ask searching questions.

The kinds of questions this student could learn to ask would deal with the relationships between himself as an automobile mechanic and automobile manufacturers, pollution, population, superhighways, and the style and quality of life thereof. If one really believes in people, whether auto mechanics, garbage collectors or college professors, one cannot question the potential for the oil and filter changer to ask all these questions concerning why he does what he does, and the aesthetics and ethics involved. For such questions represent the free man, and they only can be encouraged and elicited by teachers themselves who are free, whether they are tool and die makers or art historians. The unfortunate thing is that neither the federal government nor presidents of universities and colleges seek this kind of accountability.

The implications are staggering. Administrators and department heads would seek faculty who would ask these questions. Everyone involved in learning at a given institution would accept the fact that skill acquisition was a small part of the student's growth. Since students can never learn to expand their consciousness in any sense close to their potential unless they follow their own questions, subjects would not be "covered." For, as anyone who has read Teaching As A Subversive Activity knows, when a teacher requires students to cover material, a lot that is anti-growth occurs.[1] For one thing, what is "covered" is a part of the teacher's field of knowledge, or interpretation. The student is forced to accommodate to the world of knowledge as perceived by the teacher, and is held accountable for absorbing that world. This process can satisfy a teacher's ego, but will hardly nourish a student's impulse to discover in those areas important to himself. By blunting the questing process, the teacher negatively educates the student. The latter learns that it pays not to learn what one wants to learn, nor to question material that is not "covered." It pays to learn as one is expected to learn. It pays to learn respectable materials, taught by respectable people, who teach in respectable institutions. It pays to be respectable. This sort of learning-- or non-learning--is commonly practiced in public schools and blushingly, in too many college classrooms in too many parts of the country. To do otherwise, it is felt by many powerful people both in and out of academe, is to court anarchy.

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[1] Neil Postman, and Charles Weingartner, Teaching As A Subversive Activity (New York: Delacorte Press, 1969).

Psychological anarchy means questioning authority, but even if we forget John Dewey's insistence on this principle, we must admit our catalogues are filled with pious platitudes encouraging all entering students to seek the truth wherever it may lead--usually to an apprehensive scanning of final exam grade postings. Obstacles to growth then, are not the exclusive property of public schools. Without internal growth, of course, there can be no freedom. We return then, to our original observation, that application of the quest for inner and outer freedom by academics of power and authority would generate staggering implications. Free faculty and students would not--could not--tolerate imposed standards of excellence within the learning places. Learning would be an extension of the freedom process--engaged in for its own delights, as a necessary life condition. The images generated by such improbabilities are unnerving--let us quickly take leave of them.

Unfortunately, one image that must remain relates to post-secondary occupational program teachers. If we are to, and apparently we must, rely on the accountability theme as a necessary leverage for appropriate allocations, a certain price may have to be paid. That price may best be expressed by Peterson, writing in the Winter, 1968 issue of Daedalus. He describes American college vocationalists:

> The basic commitment of the vocationally-oriented college student is to the training he is receiving for a specific occupational career. He views his college education chiefly in instrumental terms--as a means of acquiring a skill that will ensure the occupational security and social prestige that his family has lacked. Vocationalists are predominantly from working class backgrounds, and they differ from what we will refer to as professionalists mainly in terms of socio-economic background.[2]

It may at least be a tentative hypothesis that instrumentally oriented teachers, selected by similarly oriented colleagues develop instrumentally oriented students. To some, the price may appear quite high.

We can always measure whether a student can actually perform his skills as he would be expected to perform them. His teacher's criteria for evaluating learning of materials "covered" in class would be a sufficient yardstick. We can also, if we have the time and personnel, do follow-ups on the student's employment record. It will really tell us very little that we do not already know: people who perform satisfactorily and do not ask embarrassing questions have good employment records--provided that there are no unexpected developments in the field, such as occupational obsolescence and economic disasters. Again, however, as the fourth step in assessing teachers' effectiveness, for accountability purposes these indices will do nicely. The fifth step, we are informed under the rubric of "Service to the College," would be a fair measure of the teachers' initiative and contribution to the institution. Institutions that are developed along hierarchical lines, where the president's authority flows downward to the dean, and the dean's authority flows downward to the faculty, and where the faculty are expected to function according to performance-based objectives precisely defined, rarely possess environments conducive to faculty spontaneity, innovativeness, and open advocacy of new directions. The question that presidents and deans must ask themselves if they seriously address themselves to this particular problem would have to focus back on themselves--do they really want innovative, outspoken, expressive, flexible, authority-questioning, freedom-loving faculty in their institutions?

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[2] Richard E. Peterson, "The Student Left in American Higher Education," Daedalus (Winter, 1968), 299-300.

Finally, the last step we are urged to employ in assessing our teachers' effectiveness in post-secondary occupational programs represents fairly conventional check list items that any teaching employee of any institution of a nonpunitive sort is expected to appreciate for his own professional development.

Teachers who in the narrowest sense then are accountable--whose imposed achievement criteria represent that with which they evaluate their students, and that with which they, themselves, are evaluated--do not do the following:

> Discuss the concept of freedom from fear with their students.
>
> Understand that a skill is not all-inclusive: that jobs represent a narrow world rather than a wide world.
>
> Examine with their students the concepts of roles, social stratification, and training for stratification.
>
> Understand that the last is what they can be charged with doing to their post-high school students.

Question the administrators who assign prescribed roles to teachers.

Understand that accountability when externally demanded shapes their own mental set, which thereby shapes their relations with their students.

All the above circumstances come dangerously close to prescribing a two-year college teacher, or if preferred, a post-secondary school occupational program teacher held accountable for precise goal attainments. The chief incentives for this teacher would appear to be fear, threat, and thus the need for compliance in constructing classroom teaching environments along the narrowest, most instrumental lines. Teaching, under these conditions, becomes an activity directed toward students on a step-by-step basis where skills represent, and become a world in itself. And this, it is argued, represents an institutional advocacy of instrumental learning. Such learning is thus easier to measure in terms of its efficiency. Efficiency thus justifies the curriculum. This closed circle then becomes one whose shape and quality is applauded by other institutions. For example:

Public social welfare agencies--appreciative of skill acquisition resources that allow for the upward mobility of depressed minority groups (but which never seem to reduce the distance between the lowest socio-economic stratum, and the next in any large numbers).

Political/governmental bureaus--appreciative of concrete, practical education that justifies funding, and supporting the virtuous principle of elevating the poor to a less poor classification--a resource allocation that somehow retains the fact of stratification and, it is hoped, results in directing the energies of the disadvantaged toward more innocent pursuits--achieving greater income for greater material consumption.

Financial institutions--appreciative of the larger consumer population base being generated, enabling greater and expanded credit arrangements for the benefit of the newly, upward mobile (although only for a very limited distance). It is far-fetched to view teacher effectiveness emphases as part of a maintenance-of-everything formula?

Teachers narrowly evaluated for effectiveness are in reality given criteria against which to measure their perceived worth. They are not going to be rewarded for stimulating the mechanic or technician to think beyond his job and into himself. Nor will they be rewarded for encouraging the student to involve himself more with the widest possible range of regional and world issues. The student will not be encouraged to expand his range of consciousness. Failing this, interaction with the world about him in all its subtleties and colorations that make life a wonder to live, will be denied him. He will be assigned, and will passively accept a stratified social role and occupation.

Teachers can thus be seen as effective instruments in smoothing out the rough edges of a product--the student--who will be eased into an appropriate social and economic role. This will be true until skills are related to the development of the student's awareness of his inner self, and to his capacity to express his authentic self without threat or fear. It will be true until authentic teachers encourage their students, regardless of the skill to be learned, to enhance their awareness of where their skills stand ethically in relation to the organization within which they work or will work. Should not, for example, students in post-secondary occupational programs be awakened to an understanding that subordinates have less power than superordinates? Should not such students be encouraged to think on the quality of power as a non-ethical activity when employed--and since hierarchical organizations always employ layers of authority, it follows that hierarchical organizations are internally non-ethical. Until skills are related to these kinds of learnings, post-secondary occupational programs will succeed in turning out men and women who accept their assigned roles and will be compliant, complacent, non-questioning, but fairly competent people.

But who will sustain our tool and die maker, our machinist, when in middle age he wakes up late at night lonely and looking backward? Will his teacher in such occupational programs help him by expressing defined, precise, performance objectives? Who will help the teacher? Clearly, the way we judge teachers in two-year colleges and, indeed, all learning institutions, reveals the way we perceive the institution's value system within the larger social system.

THE ACCOUNTABILITY OF OCCUPATIONAL EDUCATION TO SOCIETY

Anthony J. Salatino
Associate Professor,
Department of Educational Leadership
Eastern Michigan University

Accountability.... The concept of accountability is not new but President Nixon's February message on educational reform has redirected our attention from the "input" side of education (buildings, classrooms, faculty degrees, and books) to the "outcome" of the educational process. There is now a new sense of urgency in educational circles to focus upon the productivity of our schools. The academic achievement and behavior of the student is society's most concerned investment for the future of our nation. Although this treatise has long been an awesome responsibility of the educator, it has now become a specific directive.

Heretofore, educators have used the traditional procedures of evaluating their educational programs and institutions. The accrediting agencies provided the guidelines for excellence in education. In general, they analyzed the facilities, equipment and staff with very little attention paid to classroom procedure or the student's abilities, knowledge and skills that resulted from the teaching-learning process. But now a new door has been opened. Taxpayers, government agencies, and boards of education are recognizing --and demanding--that educational systems be administered more systematically. They want more explicitly defined, measurable goals and proof of accomplishment.

In responding to this need, accountability has been initiated into the Educational Index in 1970 as a major heading. Professional magazines are filled with articles on the subject, and educational conferences are now devoting whole programs to the accountability of education. Any educational administrator will certainly testify that the problem of accountability is no easy task. On the one hand, we have the tightening of the legislative purse strings at the state level, and an educational auditing system from Washington demanding that our colleges provide proof of wise and prudent spending; and on the other hand, we have the rising cost of inflation, monetary demands of a qualified faculty, and increasing enrollments. The number of people being served by the educational system and their individual demands for an ever-broadened curriculum is in itself colossal. Add to this the fact that in education we are dealing with many variables that imply a heterogeneous and complex group of factors that are not easily ponderable. We must deal with the human factors of attitudes and values both cultural and social as well as the economics of education such as physical facilities and finances.

Although accountability is fast becoming one of the major topics of concern, the educator is provided with very little research information as to how to justify his role in education. For too long, we have been told that education was immeasurable. We were the untouchables in our ivory towers. We have research to prove that nobody can measure our abilities. We have considered and rejected merit pay for teachers because there are too many intangibles involved. Any student who does poorly, fails or drops out of school is considered to be uneducatable or unreceptive to learning and, therefore, not the fault of anyone but himself--and certainly not the educator.

To be fair in our judgment, we must admit that educational research has provided very few valid methods of measuring the actual results of education. But now that we can no longer seek refuge behind the "immeasurables" of education, we must develop valid, realistic objectives, evolve more reliable methods of achieving them, and apply objective evaluation techniques to determine how closely these objectives are being met.

Accountability concerns measurement of educational output but not just any measurement. We are aware that more carefully designed systems for gathering output data are needed if subsequent evaluations are to have any validity. Currently, there are various types of contempory approaches that are being used for purposes of accountability in education. A few of the major approaches include the program, planning, budgeting system (PPBS); the national assessment of educational progress; performance contract programs with private concerns; state program audits (such as those used in Oregon where a director of program audits has been established); and audits at the federal level.

Let us take a short look at the audits approach. Briefly through increased urging of the U. S. Office of Education, institutions will have to commit themselves to rigorous self-evaluation in order to get program funds approved by the government. In essence the Independent Accomplishment Audit (IAA) is a process similar to fiscal reports that have in the past been a justification for the economic factors of the program involved. The IAA is designed to put both personnel and students in a problem-solving mode of thinking. Although it is built around a financial core, its focus is upon student attitudes, skills, and knowledge in specific areas. A whole range of useful by-products are anticipated from the IAA. Those using this system hope to secure knowledge of optimum relationships between output and input in any given educational program. They also feel that this system will provide new credibility in the educational process by forming a basis for the discovery and improvement of good practices in education. Those who are working with the IAA feel that their schools are becoming more responsive to the needs of the student.

The PPBS approach is organized by identifiable programs rather than by objects of expenditure as traditional budgets use. It is classified by the outputs of the organization rather than by the input. It centers on resource allocation, with the object of attempting to get the greatest return on the investment of resources in education. This involves, of course, identifying objectives, alternatives in allocations of resources, and measurement of outcomes. Harry Hatry explains that programming, planning and budgeting is a system aimed at helping management make better decisions on the allocation of resources among alternative ways to attain the institution's objectives. Its essence is the development and presentation of information as to the full implications of costs and benefits, and of major alternative courses of action relevant to major resources allocated.

Another phase of the program audit approach is the performance contract administered by outside private concerns working with local educational systems. The performance contract concept deals with ensuring that results are achieved, and it identifies responsible innovation and change when it is appropriate. This program is concerned with specific numbers of students. The contractor aims to bring each child up to a specific level of performance at the least cost to the institution. He also provides recommendations for programs and curriculums for which the output is guaranteed to justify the input.

The National Assessment of Educational Progress focuses on sampling of what the student has learned. It trys to ascertain not only what the student has learned in school, but what he knows and can use in problem solving. They who use this technique hold as a major goal the sampling of actual student behavior. This system uses a format that is more varied than most standardized tests and applies it to a group of students of a specific age range to determine how well they do in any given body of knowledge. Usually, the assessment data used in this system is concerned with broad groups of students rather than individual students or local school systems. In other words, studies in this system will have broad coverage and provide longitudinal data on progress in education.

As one reviews the approaches to accountability, we find that it is difficult to argue against the general principles involved. These systems do not require that one accept any specific set of values or purposes in education. The emphasis is entirely on making explicit and rational aims and objectives for the various programs and courses of study offered. Most of the newly proposed systems provide support to assist the teacher and student implement goals and plans already inherent in the program. It means, however, that we must better identify our educational objectives and then measure the outcomes of student learning.

If we take any system approach that is being used today in accountability (whether it be for an individual program or the total educational system) we have essentially the following steps involved. First, the objectives must be defined as specifically as possible and stated in terms of learning to be acquired. There is a need to use the usual paper-and-pencil-type tests along with other means of measuring performance in order to evaluate the true learnings of the student. This, of course, calls for a much broader range of evaluation and testing than exists in most programs today. It also calls for educational research for better methods of program implementation, evaluation and revision.

For the purpose of applying some of the principles of accountability, let us look at the vocational-technical programs offered in community colleges. This certainly is an area where accountability can be easily recognized and where it is most likely to be applied. First of all, vocational-technical programs are often costly. Second, their success is not always predictable. When one combines a sizeable investment in equipment and space with highly paid instructors and often very few students, the result is an astronomical cost per student. The students in vocational-technical programs are educated for positions in the world of work with little or no time elapsing from the classroom to the specific job for which they were prepared. This gives accountability experts a very acceptable area for study.

In preparing appropriate curriculums for vocational-technical education, educators must find ways to overcome certain problems. Societies need for increasing number of technicians and the pressure of local citizens, businesses and other interested parties in demanding broader and broader vocational-technical programs, must be balanced by the number of students interested in each of the areas provided. Many students who could or should be interested in vocational-technical education are sometimes influenced by society's premium on white collar positions.

The problem is further complicated by the fact that students seldom have prior adequate knowledge of what specific vocational-technical programs involve. Although the need for a program may be apparent, and a curriculum may be offered, too often lack of student interest in the course of study fails to justify the expense and effort of the school in providing the program.

An effective means of accounting for the establishment of vocational-technical programs is through an assessment of vocational abilities, aptitudes, and interests of students along with individual needs. Through thorough pre-vocational and work habits evaluation programs, the college will gain information that can be used in prescribing meaningful vocational-technical education. A close liasion should be maintained with counseling staff (in both high schools and community colleges), with faculty and with students, particularly during planning. Faculties in high schools and community colleges should have at least a general knowledge of new programs so that student discussions with either the teacher or counseling staff could provide information on the need for the program and the opportunity it presents.

Although this point may seem rather elementary, a look into the actual practices in program planning shows that there is a great need for: 1) more articulation between secondary and community college vocational-technical education programs; 2) better counseling of students at both levels regarding the knowledge, skills and responsibilities inherent in the various job categories offered, and 3) updated and broadened information on the part of faculty and staff for guiding students interested in vocational-technical education.

If we are to be accountable for our educational programs, then we have to set aside personal priorities, attitudes and feelings and deal with input in terms of dollars and cents. We must also look at the results of the program in terms of national, community and student needs.

Once we have successfully matched a student to the appropriate program of study, we then need to measure the student's achievement. For purposes of explanation, let us take one objective that any institution might establish for its vocational-technical program, such as to prepare students for full-time gainful employment in any one of the many recognized vocational or technical occupations. In accounting for this objective the program should provide the student not only with specific job skills; but also with a knowledge of job-finding skills, general work habits and some understanding of work and social attitudes.

Starting with the student's entry into the program, the college should be concerned with the entire spectrum of progress and not merely with academic achievement. There are two aspects of information about students necessary to help them overcome the difficulties they encounter in college and in adjusting to the work situation. The first is the assembling of reliable, accurate data on a much broader scope than is currently being done in our colleges today. The second is to transfer this knowledge of the student to the instructional staff in such a manner that it is useful to them.

The community college should investigate ways in which vocational-technical students differ in kind or in patterns of abilities rather than in degree from other college students. Any assessment of student characteristics should include an examination of as many variables as possible. It is important to have data on such matters as the student's range of abilities, the family background--economic and social--attitudes, intellectual disposition, peer group influence, occupational orientation and a host of other factors that are not usually accessible to faculty members.

Studies show that in general the bulk of technical-vocational students display an attitude that may be described as pragmatic and practical in relation to their college work. They seek knowledge for its utility. This utilitarian attitude on the part of the student presents a challenge to community college teachers to keep their academic standards high and yet give the students educational experiences that will be immediately adaptable to their personal goals.

Another application for accountability on behalf of the technical-vocational program is the cooperative work-study program. While much as been written about this approach, and there is strong backing to this very positive and practical program, few universal concepts and useful theories, and even fewer research studies have dealt with this popular method of preparing the student for the world of work.

Regretfully, most of the support for the work-study approach appears to be subjective observations and personal opinions. Although there is much to be said in favor of a program of "learning by doing," we must admit that these programs are quite lacking in theoretical development and empirical verification. This is not to suggest that the work study program should be abandoned, but it certainly could provide educators with a fertile field for accountability studies.

One of the major objectives of the cooperative work-study program is to help the student bridge the gap between theory and practice. In light of the program objectives established, it is hoped that the student will be able to identify problematic areas in his work experience, through a planned course of study on campus along with his off-campus work experiences. As in any good program in education, there should be a feedback of information about the student from the employer and from the student regarding his college and work experiences. This practical work experience should also serve as an in-service educational contact through which the local institution can keep abreast with local industries. Thus, we would have a triangle of communication among the student, the community college staff, and industry, which should be an ongoing process for implementation, evaluation and revision. With the everchanging technology used in industry, it is poor practice to have the school laboratory equipped with obsolete machinery. I have seen electronics laboratories that resemble an old-time radio repair shop. Certainly with such facilities it is much more difficult for the student to apply his on-campus work to a more realistic job situation.

In a vocational-technical program oriented toward productivity of objectives, it is important that accountability be shared by all people involved in the program. Assessment should occur at intervals suitable to appraisal and re-planning, but the establishment of objective standards will require the maintenance and analysis of longitudinal records. The essence of quality measurement in education can only be done by following the individual student over a period of years through the whole process of admission, education and early job experience. Although most institutions have a follow-up program in respect to job placement, they do not usually get much information on the probable weaknesses in the training program. There is also little effort to relate information obtained at the time of entrance with success in the school or on the job. Each part of the operation, admission, training and follow-up tends to be placed in separate compartments, which results in a lack of recognition of basic problems or fluctuation in the quality of the program. It does not lend itself to accountability studies, either through verification of student learning or curricular or operational changes based upon the results gathered. McGeorge Bundy sums up much of what I have been saying:

> ...We are moving toward a new age in education. Whether the institution is public or private--it will be held to a new level of accountability by federal and state agencies of government working at a new level of sophistication. The bureaucrats and the committees will be eager to know more than academic administrators have yet been able to tell them, and in this eagerness, they will be proper agents for the public. I suspect there is a consensus among us that we have no choice but to seek a drastic increase in the levels of public support for both private and public institutions. But the consequence for us all is a new requirement of candor. In their economic affairs, our colleges and universities must now become open-- to themselves, to each other, to public authority, and indeed to all.

The call for accountability in education is a summons to review and reform the educational system.

Leon Lessinger, who is sometimes called the father of accountability in education, says, "For too long we have confused measurement of results in education with standardized achievement testing of the paper and pencil, normal curve based variety. Limited to this useful but restrictive means of assessment, the pursuit of accountability would be frightening and even potentially destructive, for not everything in education can be, or ought to be, qualified in such a manner." We must, therefore, find more valid and appropriate means of measuring the outcome of the teaching-learning process.

COMMENTARY ON DR. SALATINO'S PAPER

Fred A. Snyder
Director, Research and Community Resources
Harrisburg Area Community College

My comments are an extrapolation, interpretation or extension of Dr. Salatino's paper. They focus on specific elements of program implementation.

Dr. Salatino has noted accountability as including focus on productivity, measurable goals, and proof of accomplishment. As educators, we are accountable to a broad range of groups: taxpayers, students, parents and citizens in immediate supporting areas, governing boards, government agencies, and other institutions. We are also accountable for certain cultural and educational values. As professionals, we are accountable for many facets of program development and student learning. These include developing programs to meet manpower and societal needs; developing programs that fit available student populations and student needs; assuring suitable outcomes from such programs, continuous adaptation of new programs; to meet changing needs; and communicating the existence and the nature of such programs to potential students and to employer groups.

Barriers to Quality Education

From a broadly social point of view, there are several barriers to quality occupational education programs at the two-year college.

Social status of careers

The first of these is that we have a system of basic education that is warped for several types of students. Students from low socio-economic backgrounds often do not receive the high quality of educational experiences that existing technology and expertise can provide. In addition, students from middle and upper status groups are often "blocked out" from most occupational education programs by a set of values held by educators, parents and the larger society. Ironically, for some of these same reasons of status as well as for additional ones, students from low-status groups are also blocked from technical careers that require formal training, although they are subsequently forced into menial jobs where no training is required. Although this barrier is a significant one, I will not develop it further here.

Professional staff development

A second barrier to quality education in the two-year college, both in general education and in occupational education, is the lack of a system for staff development. Such a system must prepare administrators, instructors, guidance personnel and others for their complex role of developing and implementing vocational technical education programs. One weakness sometimes found among two-year college staffs is a gulf between educational institutions and employers. Another is a heavy reliance upon traditional educational forms such as curriculum, instruction, and related procedures.

Career ladders

Another barrier to quality occupational education is the absence of adequate career ladders or a planned system of personal progression within career areas, from the non-professional to paraprofessional to professional levels. For example, the career ladder is better developed in engineering and related technical areas than it is in education and several areas in public services.

It follows that a program of continuing education, for maximum effectiveness, must be tied in with available and potential opportunities for personal progression in specific careers.

Administrative and management structure

Still another barrier to quality education is the lack of appropriate administrative and management structure to allow for operating during a period of changing technology and social reality. It is this barrier to quality education and accountability to which most of my comments are addressed. Although the other problem areas are important, I think the development of adequate administrative and management concepts is a most significant area for improving educational quality and for developing the bases for accountability by institutions for their educational outcomes.

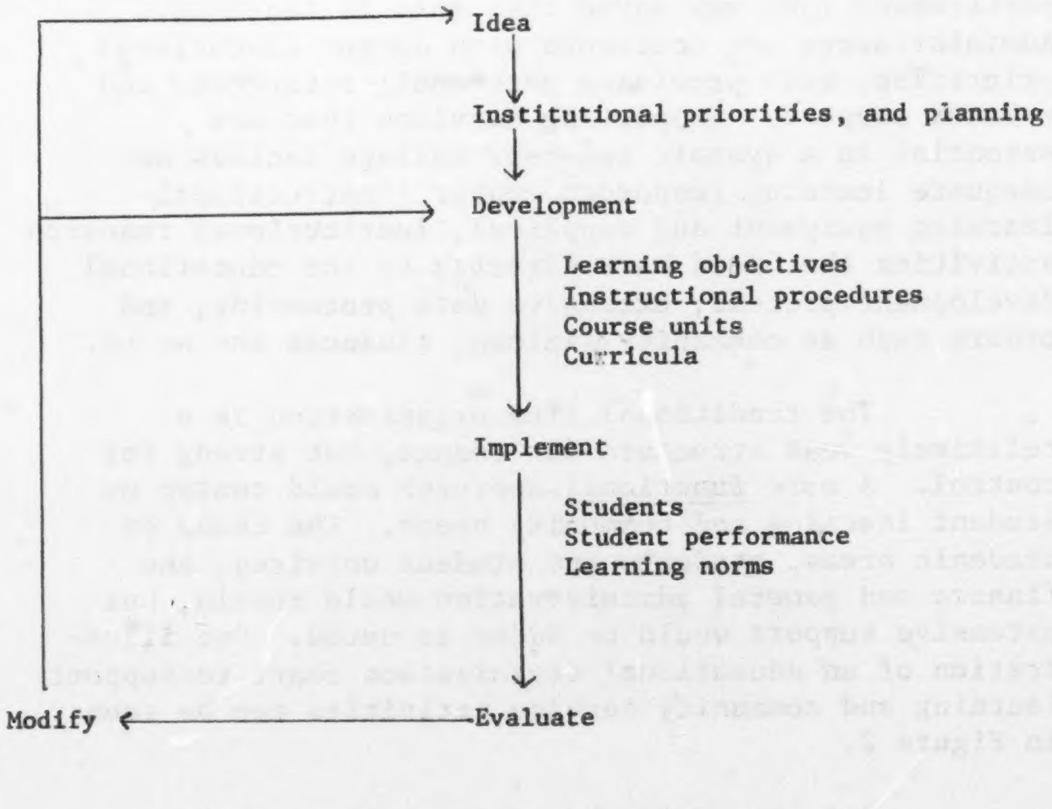
Let us look first at the development of educational programs. Educational programs do not just happen; they are developed systematically. They must focus on students, their values and personal aspirations, and appropriate performance competencies. Local community research is needed to identify student characteristics and relate these to program needs.

To provide for maximum accountability, programs develop from ideas into learning objectives, criteria or procedures for measuring learning outcomes, and instructional procedures. These programs may be organized into course units of any length (of which the traditional semester or term structure is just one) or into entire curricula (See Figure 1). Note Arthur Cohen, Dateline 1979.

Realistically, any initially developed program must be viewed as tentative. During initial implementation, the earlier elements are tested and may be modified as a result of evaluation procedures. Modifications result from experiences with students, their performances, and comparison to norms of behavior,

FIGURE 1

Development of Educational Programs


Idea
Institutional priorities, and planning
Development
Learning objectives
Instructional procedures
Course units
Curricula
Implement
Students
Student performance
Learning norms
Modify
Evaluate

namely, the earlier-stated learning objectives. Of course, the process includes new ideas, new procedures, and so forth--a systems approach as opposed to a flat linear development.

The procedure just noted assumes a dynamic societal setting, with an accompanying dynamic model of program development. The instructor cannot simply teach. Administrative and supporting services cannot simply support teaching. They must all be concerned with accountability for educational outcomes, albeit at different areas. Façulty are accountable for specifying appropriate learning objectives and for student performance (you may agree that this is teaching). Administrators are concerned with larger educational priorities, with providing personnel, resources, and related support. Supporting services that are essential to a dynamic two-year college include an adequate learning resources center (instructional-learning equipment and supplies), institutional research activities that feed back directly to the educational development process, extensive data processing, and others such as community liaison, finances and so on.

The traditional line organization is a relatively weak structure for change, but strong for control. A more functional approach would center on student learning and community needs. The deans of academic areas, students and student services, and finance and general administration would remain, but extensive support would be added as noted. One illustration of an educational organization chart to support learning and community service activities can be seen in Figure 2.

But, to avoid the preconceptions that traditional line and staff structure might suggest, a neutral illustration is also shown (Figure 3). The value of this illustration is that it calls attention to the common goal of student learning and community service, rather than other secondary bureaucratic goals.

FIGURE 2

Organization for Program Development and Accountability

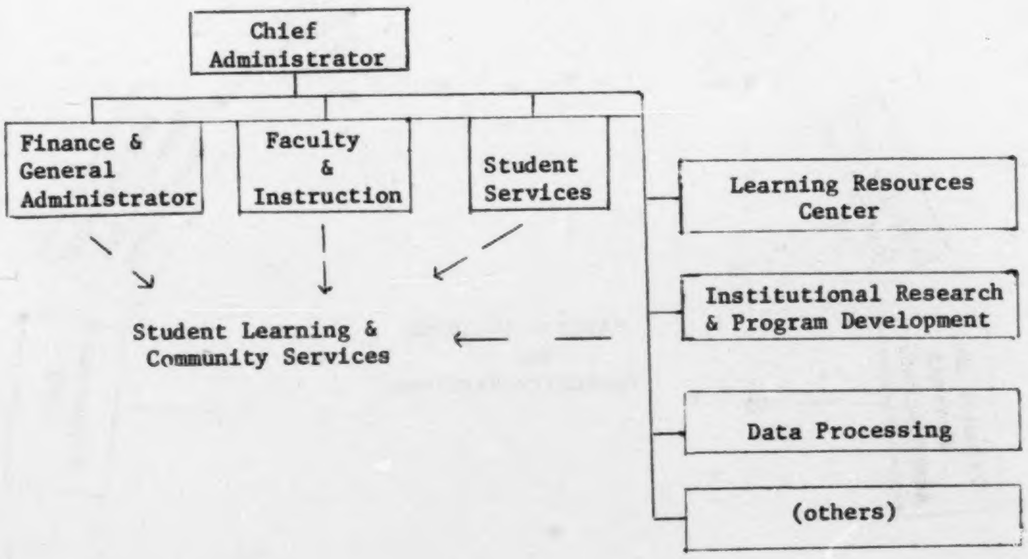
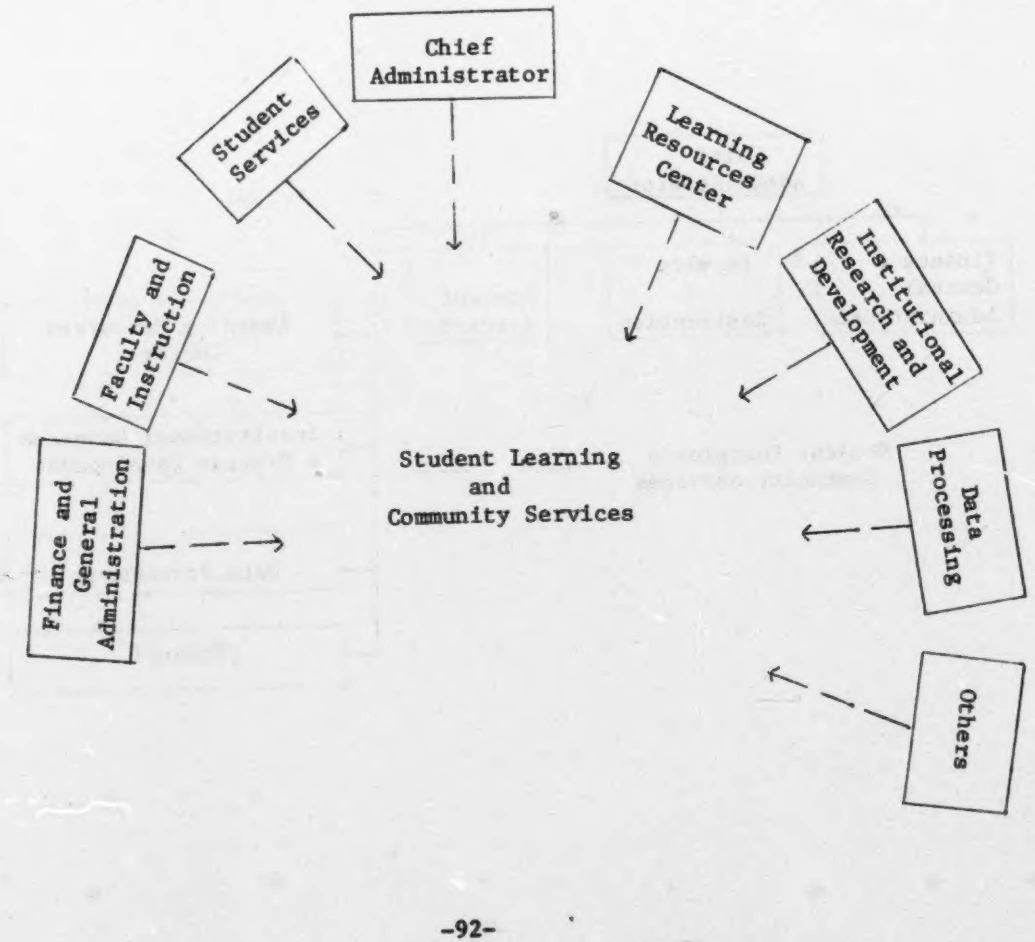

Chief Administrator
Finance & General Administrator
Faculty & Instruction
Student Services
Learning Resources Center
Institutional Research & Program Development
Data Processing
(others)
Student Learning & Community Services

FIGURE 3

Organization for Program Development and Accountability


Chief Administrator
Student Services
Learning Resources Center
Institutional Research and Development
Faculty and Instruction
Finance and General Administration
Student Learning and Community Services
Data Processing
Others

It avoids for now the usual concerns of hierarchial relationships, which are only instrumental to the central goal of the college.

Summary

My comments about a management and administrative system grow logically from Dr. Salatino's paper, and they are based upon two premises that (1) the two-year college must plan extensively to meet diverse educational needs of the community and its citizens; and (2) it must be accountable for educational outcomes in the several types of educational programs and services that it offers.

COMMENTARY ON DR. SALATINO'S PAPER

Kermit C. Morrissey
President, Community College of Allegheny County

It is clear that accountability is to be the standard for the foreseeable future, with all of the potential improvement that it promises. However, there is also the danger of overstatement in relationship to new requirements that should be clearly understood. The word "accountability" involves the concept of measurement from the beginning to the end of an educational process, and it assumes that what is measured at every point can then be transmitted in an objective, verifiable manner. In attempting to meet new public and political standards of accountability, it is at least possible that American education might unwittingly escape from its present dilemma and thereby make a bad situation even worse.

The growing demand for accountability is caused in large measure from widespread dissatisfaction with the results achieved throughout the American educational enterprise. Minority groups become more and more certain that school systems as presently organized are conscious, or at least tacit, conspiracies that insure their failure. The clamorous demands for separate identity of groups within American society lead in turn to the demand that schools reflect such identities as a major part of the educational process. Separateness as a demand affects not only minority groups in the traditional sense, but potentially affects and will affect a number of groups not heretofore considered as minorities in American society. A move to individuality, then, is a pervasive major theme of contemporary society; moreover, it is having a major impact upon all of the institutions of American education.

It is hoped that this stress upon productivity in education will also mean far greater attention to individuals in classrooms and the development of programs that will permit individual needs and potentials to be joined with economic necessities and social purpose in new and demonstrable ways. The goal is admirable in all respects, but some caution would seem to be desirable in a society changing as rapidly as our own.

American educators can hardly be blamed for their inability to anticipate the massive withdrawal of public affection in recent years. Our schools and colleges often appear to be branches of a disintegrating theocracy. Greater attention is demanded for each discrete individual, and if this requirement is to be met it will require knowledge that is not yet complete or knowledge that we do not have in complete form, tools that are vague at best, and a new form of training for all professionals in the educational process. Caution in this context is an elementary form of common sense.

Accounting for educational inputs through more objective cost centers is easily accomplished. Performance budgeting will produce more effective means for rational choices to be made, but accounting systems are at best a peripheral afterthought that explains expenditures in the language of the marketplace. The input side of an accountability system is a desirable but minor alteration. The critical issue is the measurement of output or productivity and this is where all of the issues of American educational ferment are currently joined. It is ironic that at the very moment when fundamental changes must be made in American education new identities within the educational establishment are emerging in the form of professional organizations whose bargaining power will be evident in any change of output measurement. At the present time, education is adjusting its accounting input mechanisms rather quickly and without discord; the other necessary half of the accountability goal is necessarily deferred in the hope that effective instruments can be developed for objective evaluation of educational productivity.

There are many current efforts being made to narrow the gap between individual interest and ability on the one hand, and social purpose on the other--the WICHE efforts, the Voucher experiments, private corporate subcontracting, and so on--and from this widespread activity there should emerge a more defensible and accountable posture for American education. However, at least two soft areas will continue to harass occupational education in the United States. The first is the attitude of American students as a reflection of an overall point of view in American culture. A few elementary school systems in the United States do attempt to accommodate the whole range of youthful interest, but they remain notable exceptions at the present time. Very few elementary schools, to my knowledge, utilize student interest in technology, for example, with hands-on familiarity. American homes are cluttered with appliances that cannot be fixed, and the diversified interest of American youth remains unrelated to the lack of maintenance in our society. Illustrations abound on this point, so I will not labor it further. Suffice it to say that the lack of knowledge and readiness of youthful Americans for appropriate occupational involvement will remain until such time as individual interest patterns are woven into the fabric of elementary school programs. If this assumption is correct, community colleges in America will continue to enroll a very large number of high school graduates who lack specific career orientation and who at the same time are woefully inadequate in their basic academic preparation. If enrollment in remedial or developmental work is to affect approximately one-third of all students in community colleges, then perhaps here is where accountability can be most productive for the individual, for the institution and for society. More refined indices of accountability are desirable in all programs, but accountability in the entire remedial effort of the community college would effectively substantiate one of the colleges' primary reasons for existence. There is no better incentive for human beings than successful experiences in or out of the classroom. To the extent that success is maximized in remedial education, the community colleges will serve the growing needs of individuals and the demands of society. The other area of continuing softness is the inability to project occupational trends with precision in the American economy.

The plight of the professional engineer in 1970 emphasizes the erratic relationship between job preparation and economic demand. There is no reason to believe that fluctuations in skill demands will not continue, and those engaged in occupational education will have to refine their projection tools and educational strategies in order to be more productive in the midst of uncertainty.

Accountability, then, offers the promise of more effective educational service by obliging all educators to examine their practices in relation to output, but excessive enthusiasm should be tempered by remembered events. Educational change is directly related to educational fashion as well as political necessity, and inasmuch as fashion is a whim and political forces are variable, it should be approached with reasoned skepticism. Accountability with a stress upon the objective measurement of output can be a powerful instrument for desirable change; it is unlikely, however, to remove American education from the vortex of social conflict.

EVALUATION OF THE CONFERENCE

Richard R. Olson
Graduate Assistant
Department of Vocational Education
The Pennsylvania State University

In the introduction Dr. Gillie listed the major objectives of this conference as:

1. To provide authoritative presentations on evaluation of post-secondary occupational education in terms of programs, faculty and institutions.

2. To provide conferees with information that will better enable them to identify the most important factors in evaluation and to find approaches and guidelines usable by them in their respective positions as educators.

3. To provide an opportunity for educators and students of post-secondary occupational education to come together for an exchange of ideas and viewpoints on evaluation.

4. To continue the series of cooperative ventures between the university and Pennsylvania post-secondary institutions that are aimed at contributing to the overall improvement of post-secondary occupational education.

A scheme for evaluating the conference in terms of the stated objectives was initiated immediately after the conference ended. The major source of information was a follow-up telephone interview of 30 randomly selected conference participants (over 40 percent of the registrants). These interviews were conducted from November 16 thru November 19, approximately two weeks after the conference had ended. It should be mentioned that the original sample of 30 subjects were also subdivided into three groups of 10 each. Starting with the seventh question, each group was asked the same questions about one of the three presentations (each group had a different topic). See Appendix D for the interview diagram and questionnaire. The results of this interview are summarized in the following paragraphs.

Attendance

At all three of the main presentations, 77 percent (23) of the participants were present; 13 percent (4) were present for two of the main presentations, and 10 percent (3) attended only one presentation. Another way to look at attendance is by speaker, and here we find Medsker's presentation attracting 100 percent (30). Wiegman's presentation, 87 percent (26), and Salatino's 80 percent (24) of the participants. This was also the order of the presentations.

Topic Interest

Since this area was one concerned with comparing topics, those sample subjects who attended only one of the main presentations were omitted and the responses of the remaining 27 participants were then considered.

Salatino's topic was found most interesting by 30 percent (8) of the remaining sample, while equal groups of 26 percent (7) found Medsker's and Wiegman's topic most interesting, and 18 percent (5) found all of the topics equally interesting.

Authoritativeness

Again, only the responses of those participants who attended at least two of the presentations was considered. The degrees of authoritativeness perceived by the participants are presented in Table 1.

TABLE 1

	Medsker	Wiegman	Salatino	No Opinion
Most Authoritative	59% (16)	15% (4)	11% (3)	15% (4)
Least Authoritative	4% (1)	33% (9)	26% (7)	37% (10)

Opportunities for Participant Interaction

The replies to questions 5 and 11 of the follow-up questionnaire were nearly identical and are grouped here. In general, about 66 percent viewed the discussion sessions as the best opportunity to exchange ideas and viewpoints on evaluation. Meals and post-discussion sessions were viewed equally as the next best opportunities for interaction.

When queried as to how the university might be of greater assistance to post-secondary occupational education, the most commonly mentioned areas were: 1) additional conferences (50 percent); 2) teacher preparation (33 percent); 3) research and evaluation (27 percent); and 4) leadership in evaluation programs (20 percent).

Evolving Plans and Strategies

Respondents replies to questions 7 thru 10 are considered separately for each presenter (10 each). Questions 7 thru 10 were concerned with the following:

a) major points made by the presenter

b) major points made by the reactors

c) strategies that evolved from the previous interactions

d) plans to implement the evolved strategies

Medsker's Presentation

The point most frequently related to Medsker's presentation was his emphasis on product evaluation (5). Other points recalled included urgency of evaluation, need for the conceptualization of objectives, lack of criteria for vocational education, and the need for evaluation models. Half of the respondents (5) could not recall a single major point made by the reactors to Medsker's presentation. Areas that were covered by the reactors that noted were included urging action rather than talk; evaluation is a continuous process; define the problem and then act on it; and information about specific evaluation programs.

Six of the ten respondents explicitly stated that no strategies evolved from this presentation had direct application for their work. The other four respondents gave somewhat nebulous answers as to evolved strategies, such as accountability, selectivity, and process evaluation; try to identify objectives and follow-up of students; interest in either a mathematical or systems model. Since no definitive strategies evolved from this presentation, the plans to implement evaluation strategies were quite hazy. Plans mentioned were to get the administration more involved and be more aware of objectives.

Wiegman's Presentation

Major points recalled from Wiegman's presentation were the great breadth of faculty personality, faculty must be accountable in terms of behavorial objectives, the need for inputs from the faculty, and involvement of both the administration and faculty in evaluation. Most of the points remembered from the reactors presentations were of a philosophical nature, that is, a need for humanism, liberation of the students, need for an atmosphere of freedom for "mind expansion," encourage unstructured thinking, purpose of education is student self-realization, and an emphasis on the humanities.

Half of the respondents could not see any strategy evolving from this paper that had direct application to their work. The other half of the respondents gave hazy answers to evolved strategies, such as merit pay increases, involvement with product rather than process, evaluation by objectives set up in advance, and consider total performance. Plans to implement any kind of evolved strategy again centered on the ideas of involving administrators and evaluation by objectives.

Salatino's Presentation

Major points recalled from Salatino's presentation were accountability in education is here, the need to develop rational decision aids, and the possibility of contract performance. There was no consensus of opinion on the major points made by the reactor panel. Comments included process and product cannot be separated; caution concerning the kinds of tools used for evaluation--PPBS is not a panacea; emphasis on social accountability; and the fact that the reactors did not really react to the paper.

Like the first two presentations, this one did not seem to have any strategies that evolved per se but rather ideas on evaluation were mentioned that may have started to germinate, such as PPBS, educator's reluctance to try new things, cost-benefit analysis, and the description of the task analysis approach. Strategy implementation plans centered on involving administrators and an evaluation by objectives.

Conference Topics Desired

Topic areas desired for the next conference on post-secondary occupational education included the following:

1. Program Development--trends and construction of curriculums (13)
2. Implementation of evaluation procedures (12)
3. Techniques for recruitment and placement (7)
4. Teacher training (5)
5. Goal determination (4)

Conclusions

All of the objectives of the conference mentioned earlier received coverage to a greater or lesser degree. The tone of the follow-up interviews can be best characterized as one of mild disappointment over the strategies (or lack of same) on evaluation that did emerge. This can be understood to some extent when the conferees' makeup is recalled. Occupational educators are concerned with tangible results--manifest plans and methods, specific strategies and techniques, and concrete models and paradigms and they have little patience for theory and abstractions. The main plans mentioned concerning approaches to evaluation were probably plans that the conferees had arrived with such as more involvement of administrators and emphasis on objectives.

If one tries to review the literature on evaluation procedures, he finds the task overwhelming. Most authors agree that there are two major components of evaluation--1) information processing (selecting, collecting and analyzing) and 2) decision making (judgment). However, the state of the art in evaluation is such that general techniques have yet to emerge. Thus each individual must develop techniques to solve his particular evaluation problem. It might be as is said in industrial management, "If you don't have a gut feel for the job to start with, you'll never really understand it."

APPENDIX A

Program
Second Annual Pennsylvania Conference on Post-Secondary Occupational Education

CONFERENCE DIRECTOR: Dr. Angelo C. Gillie
Associate Professor
Department of Vocational Education
The Pennsylvania State University

CONFERENCE ADVISORY COMMITTEE CHAIRMAN: Mr. Robert L. Sheppard
Bureau of Academic Services
Department of Education
Commonwealth of Pennsylvania

TOPIC: PROGRAM IMPROVEMENT THROUGH EVALUATION

DATES: November 4-5, 1970

PLACE: J. Orvis Keller Conference Center
The Pennsylvania State University

AGENDA:

November 4, 1970

11:00 a.m. - 12:00 noon Registration, Conference Center, Lobby

12:00 noon - 12:45 p.m. Luncheon - Multipurpose Room
Conference Center, Ground Floor

12:45 p.m. - 1:30 p.m. Conference Center, Room 402-403

Toastmaster: Mr. Robert L. Sheppard

Welcoming remarks: Dr. Abram W. VanderMeer, Dean
College of Education
Penn State University

Dr. Joseph T. Impellitteri
Chairman
Graduate Studies and Research
Department of Vocational Education

Speaker: Mr. Robert M. Knoebel, Director
Bureau of Management Services
Department of Education
Commonwealth of Pennsylvania

Topic: "Evaluation: A Must"

1:30 p.m. - 2:00 p.m. Paper: "Strategies for Evaluation of Post-Secondary Occupational Programs"

Speaker: Dr. Leland Medsker, Director
Center for Research and Development
in Higher Education
University of California at Berkeley

2:00 p.m. - 2:45 p.m. Reactor Panel: Dr. John L. Leathers, Director
Altoona Campus
Penn State University

Dr. Raymond Pietak, Provost
Community College of Philadelphia

2:45 p.m. - 3:15 p.m. Coffee Break - Fourth Floor Corridor
Conference Center

3:15 p.m. - 4:30 p.m. Discussions - Group A - Conference Center, Room 312

Chairman: Dr. Jerry Leventhal
Teacher Education
Temple University

Discussions - Group B - Conference Center, Room 401

Chairman: Dr. Elwood Shoemaker
Higher Education Association
Bureau of Management Services
Department of Education
Commonwealth of Pennsylvania

Discussions - Group C - Conference Center, Room 405

Chairman: Mr. Louis A. Dimasi, Director
Penn Technical Institute
Pittsburgh, Pennsylvania

5:30 p.m. - 7:00 p.m. Dinner - Penn State Room, Nittany Lion Inn

Toastmaster: Dr. Robert L. Lathrop
Assistant Dean for Resident Instruction
College of Education
Penn State University

Speaker: Dr. James Evanko
Dean of Faculty
Allegheny Campus
Community College of Allegheny County

7:00 p.m. - 8:00 p.m. Conference Center, Room 402-403

Paper: "Strategies for Evaluation of Post-Secondary Occupational Educational Faculty Performance"

	Speaker: Dr. Robert R. Wiegman, Dean College of Education Florida Atlantic University Boca Raton, Florida
8:00 p.m. - 9:00 p.m.	Reactor Panel: Dr. Herbert Eisenstein Assistant Dean Capitol Campus Penn State University Dr. Douglas Libby President Community College of Delaware County

November 5, 1970

8:30 a.m.	Reconvene - Conference Center, Room 402-403
8:40 a.m. - 9:30 a.m.	Paper: "The Accountability of Occupational Education to Society" Speaker: Dr. Tony Salatino Associate Professor Department of Educational Leadership Eastern Michigan University Ypsilanti, Michigan
9:30 a.m. - 10:30 a.m.	Reactor Panel: Mr. Fred Snyder, Director Research and Community Services Harrisburg Area Community College Dr. Kermit Morrissey President Community College of Allegheny County
10:30 a.m. - 11:00 a.m.	Coffee Break - Fourth Floor Corridor Conference Center
11:00 a.m. - 12:00	Discussions - Group A - Conference Center, Room 312 Chairman: Dr. Jerry Leventhal Discussions - Group B - Conference Center, Room 401 Chairman: Dr. Elwood Shoemaker Discussions - Group C - Conference Center, Room 405 Chairman: Mr. Louis A. Dimasi
12:00 noon - 12:45 p.m.	Luncheon - Multipurpose Room Conference Center, Ground Floor

12:45 p.m. - 1:30 p.m. Conference Center, Room 402-403

Toastmaster: Mr. E. Jerome Kern
Vocational-Technical Education Advisor
Bureau of Academic Services
Department of Education
Commonwealth of Pennsylvania

Conference Synthesis: Dr. Angelo C. Gillie

1:30 p.m. - 2:00 p.m. Concluding remarks: Mr. Robert L. Sheppard

2:00 p.m. Adjournment

APPENDIX B

Registration List

Bacon, John W.
Asst. Dean of Instruction
Tech. Arts, Butler Co. Comm. College
College Dr., Oak Hills
Butler, Pa. 16001

Banta, Andrew
Asst. Professor
Northampton Co. Area Comm. College
3835 Green Pond Road
Bethlehem, Pa. 18017

Batiste, John
Dean of Community Services
Community College of Alleg. Co.
Boyce Campus, 595 Beatty Rd.
Monroeville, Pa. 15146

Bedford, John S.
Asst. Prof. of Engineering
The Behrend Campus - Penn State
Station Road
Erie, Pa. 16510

Bergerstock, Donald
Chairman, Business Dept.
The Williamsport Area Comm. College
1005 West Third St.
Williamsport, Pa. 17701

Bierly, George
Penn State Campus
Box 1830
Wilkes-Barre, Pa. 18708

Boyers, Ralph L.
Asst. to Pres. for Research
Williamsport Area Comm. College
1005 West Third St.
Williamsport, Pa. 17701

Bressler, James
Dean of Applied Arts & Sciences
Williamsport Area Comm. College
1005 West Third St.
Williamsport, Pa. 17701

Burkett, Harry L.
Instructor in Engineering
DuBois Campus - Penn State
College Place
DuBois, Pa. 15801

Clark, Dr. John H.
Asst. Dean of Academic Affairs
Montgomery Co. Comm. College
612 Fayette St.
Conshohocken, Pa. 19428

Connor, William A.
Assoc. Dean of Tech. & Cont. Ed.
Northampton Co. Area Comm. College
3835 Green Pond Rd.
Bethlehem, Pa. 18017

Dawson, Robert E.
Director
Worthington Scranton Campus - Penn State
120 Ridge View Dr.
Dunmore, Pa. 18512

Delgrosso, George M.
President
Lambton College of Applied Arts & Technology
Sarnia, Ontario, Canada

DeJaiffe, Ernest
Prof. of Engineering
Altoona Campus - Penn State
Altoona, Pa. 16601

Dimasi, Louis A.
Director
Penn Technical Institute
5440 Penn Avenue
Pittsburgh, Pa. 15139

Eisenstein, Herbert S.
Asst. Dean of Faculty
The Capitol Campus - Penn State
Middleton, Pa. 17057

Elison, Dean George W.
Dean of Technologies
Lehigh Co. Comm. College
2370 Main St.
Schnecksville, Pa. 18078

Farneth, Dr. Harold E.
Academic Dean, South Campus
Comm. College of Alleg. Co.
250 Lebanon School Rd.
West Mifflin, Pa. 15122

Ferencz, William R.
Chr. Business & Management Serv.Div.
Harrisburg Area Comm. College
330 Cameron St.
Harrisburg, Pa. 17110

Foster, Robert
Asst. Prof. Eng. Graphics
Penn State
328 Hammond Bldg.
University Park, Pa. 16802

Frantz, Curtis L.
Principal
N. Schuylkill Area Vo-Tech School
Frackville, Pa. 17931

Fox, Oscar E.
Asst. Dir., Resident Ed.
York Campus - Penn State
1031 Edgecomb Ave.
York, Pa. 17403

Gates, Claude L.
Dean of Instruction
Westmoreland Co. Comm. College
59 Lincoln Highway East
Jeanette, Pa. 15644

Gehris, Paul W. E.
Assoc. Prof. General Eng.
Berks Campus - Penn State
814 Hill Ave.
Wyomissing, Pa. 19610

Gilmore, Charles
Dept. of Human Service Careers
Comm. College of Philadelphia
34 S. 11th St.
Philadelphia, Pa. 19107

Hale, Jeanne
Student Teacher
State University of N.Y.
3225 Main St.
Buffalo, New York 14214

Hanavan, Francis
Asst. Prof.
State University of New York
Suny at Buffalo
Buffalo, N.Y.

Hardy, Sarah
Student Teacher
State University of N.Y.
3225 Main St.
Buffalo, N.Y. 14214

Harpster, James E.
Vocational Education
Juniata Mifflin Area Vo-Tech School
Pitt St. & Belle Vernon Ave.
Lewistown, Pa. 17044

Heinemann, Harry N.
Dean of Community Services
Comm. College of Alleg. Co.
Allegheny Campus
808 Ridge Ave.
Pittsburgh, Pa. 15212

Herring, Henry Irvin
Director
Schuylkill Haven Campus - Penn State
Schuylkill Haven, Pa. 17901

Higley, Phyllis
Education
State University of N.Y.
3225 Main St.
Buffalo, N.Y. 14214

Hiller, Donald S.
Director
DuBois Campus - Penn State
DuBois, Pa. 15801

Homisak, William
Williamsport Area Comm. College
1005 W. Third St.
Wiliamsport, Pa. 17701

Horvath, Dean Ronald J.
Dean of Liberal Arts & Sciences
Lehigh Co. Comm. College
2370 Main St.
Schnecksville, Pa. 18078

Jones, Fred
Drafting Dept.
The Williamsport Area Comm. College
1005 West Third St.
Williamsport, Pa. 17701

Keating, Barry P.
Coordinator of Business Dept.
Comm. College of Delaware Co.
Concordville Rd.
Media, Pa. 19063

Kern, E. Jerome
Vo. Tech. Advisor
Bur. of Academic Services
Pa. Dept. of Education, Box 911
Harrisburg, Pa. 17126

Kray, Eugene
Associate Dean
Comm. College of Delaware Co.
BaltimorePike and Thornton Rd.
Media, Pa. 19063

Kwak, Michael S.
Director of Admissions
Luzerne Co. Comm. College
19-21 N. River St.
Wilkes-Barre, Pa. 18702

Leventhal, Dr. Jerome I.
Teacher Educator, Vo-Tech
Temple University
316 Seltzer Hall "I"
Philadelphia, Pa. 19122

Magnotta, Albert J.
Group Leader - Drafting & Design
Tech. - Worthington Scranton
Campus - Penn State
120 Ridge View Dr.
Dunmore, Pa. 18512

Mastriani, Ralph L.
Asst. Dir. for Resident Instruction
Worthington Scranton Campus - Penn
State
120 Ridge View Dr.
Dunmore, Pa. 18512

Masuret, Joane
Dir. Health Manpower Project
The Hospital Ed. & Res. Foundation
of Pa.
1200 Camp Hill By-Pass
Box 608
Camp Hill, Pa. 17011

McCormick, David N.
Ex. Vice President
Duffs Business Inst.
717 Liberty Ave.
Pittsburgh, Pa. 15222

Molinari, Dr. Ralph
Asst. Dean of Faculty
Boyce Campus - Allegheny Co. Comm.
College
595 Beatty Rd.
Monroeville, Pa. 15146

Neumann, Harold J.
Asst. Prof. of Eng.
The Behrend Campus - Penn State
Station Rd.
Erie, Pa. 16510

Nicol, Sanford F.
Asst. Dir.
Ogontz Campus - Penn State
1600 Woodland Rd.
Abington, Pa. 19001

Oates, Dr. Harvey B.
Dir., Div. of Life Sci. and Allied
Health Services
Comm. College of Phila.
34 S. Eleventh St.
Philadelphia, Pa. 19107

Pellen, Eminagane Kay
Northampton Co. Area Comm. College
Green Pond Rd.
Bethlehem, Pa. 18017

Perkins, Dr. Harold W.
Director
Berks Campus - Penn State
814 Hill Ave.
Wyomissing, Pa. 19610

Pietak, Dr. Raymond
Comm. College of Phila.
34 S. 11th St.
Philadelphia, Pa. 19107

Przybylek, Daniel C.
Dir. of Cont. Educ.
Comm. College of Alleg. Co.
Boyce Campus, 595 Beatty Rd.
Monroeville, Pa. 15146

Romano, John
Montgomery Co. Comm. College
612 Fayette St.
Conshohocken, Pa. 19428

Rooth, Stewart R.
Instructor - Economics
Northampton Co. Area Comm. College
3835 Green Pond Rd.
Bethlehem, Pa. 18017

Schieck, George A.
Admin. Asst. to Director
Reading-Muhlenberg Area Vo-Tech
School
Box 3068
Reading, Pa. 19604

Shaffer, E. Bertrum
Dean of Instruction
Butler Co. Comm. College
College Drive, Oak Hills
Butler, Pa. 16001

Sheppard, Robert L.
Chief, Div. of Occ. Ed.
Bur. of Academic Services
Pa. Dept. of Education, Box 911
Harrisburg, Pa. 17126

Sheridan, Laurence W.
Teacher
Penn State
R. D. 4, Box 1
Altoona, Pa. 16601

Sheridan, Margaret G.
Asst. Prof. of English
Altoona Campus - Penn State
Altoona, Pa. 16601

Shoemaker, Elwood A.
Higher Ed. Assoc. Bur. of
Management Services
Pa. Dept. of Education
Box 911
Harrisburg, Pa. 17011

Smith, Charles J.
Director
Ogontz Campus - Penn State
Abington, Pa. 19001

Snyder, Fred A.
Dir., Res. & Comm. Resources
Harrisburg Area Comm. College
Harrisburg, Pa. 17110

Snyder, Ray
Asst. Dir. for Cont. Ed.
Schuylkill Campus - Penn State
Schuylkill, Pa. 17972

Stasulat, Joe J.
Asst. Dir. for Resident Instruction
Shenango Valley Campus - Penn State
147 Shenango Ave.
Sharon, Pa. 16146

Staudenmeier, James J.
Psychologist
Hazleton Campus - Penn State
Hazleton, Pa. 18201

Sugarman, Dr. Michael N.
College of Education
University of Akron
Akron, Ohio 44304

Uhl, Professor James B.
Asst. Prof. of Eng.
York Campus - Penn State
1031 Edgecomb Ave.
York, Pa. 17403

Velzy, Richard J.
Coord. of Governmental & Special
Grants
Comm. College of Allegheny Co.
711 Allegheny Bldg.
Pittsburgh, Pa. 15219

Wilkinson, Charles
Chairman, Automotive Dept.
The Williamsport Area Comm. College
1005 W. Third St.
Williamsport, Pa. 17701

Witmer, T. Dean
Dept. of Education
Harrisburg, Pa. 17126

Zubrod, Jack G.
Altoona Campus - Penn State
Altoona, Pa. 16601

APPENDIX C

Conference Advisory Committee

Chairman: Mr. Robert L. Sheppard
Dr. Harold Perkins
Dr. Hartley Johnston
Dr. Theodore Cody
Dr. John Leathers
Mr. Fred Snyder
Dr. Larry Leslie
Mr. E. Jerome Kern
Dr. Robert Foster
Mr. Richard Skinner

APPENDIX D

Follow-up Interview for Conference Evaluation

This is Cheryl Gumaelius of PSU calling. I am Dr. Angelo Gillie's graduate assistant, and we are conducting a follow-up study of the conference on post-secondary occupational education which you attended November 4th and 5th. The interest you have shown by attending the conference hopefully has been and will continue to be of direct benefit to you. Will you help us evaluate the conference and improve future meetings by answering the following questions:

CONCLUSIONS:

Thank you for your cooperation. Your assistance and suggestions will certainly help us in planning future conferences.

Follow-up Interview for Conference Evaluation

Questionnaire

1. How many of the three main presentations did you attend?

    a. Dr. Medsker - program evaluation
    b. Dr. Wiegman - faculty performance
    c. Dr. Salatino - accountability of occupational ed. to society

2. Which of the three topics did you find most interesting?

3. Which of the three was least authoritative?

4. Which of the three was most authoritative?

5. Where did you have the most opportunity to exchange ideas on evaluation during the conference?

6. What are the best ways in which PSU could be of greatest assistance to post-secondary instruction in the development and improvement of occupational education?

Intro to 7-12: Can I ask you several questions concerning _________'s paper dealing with _________________(topic)?

7. What do you think were the two major points made by Dr. ___________ concerning _______________(topic)?

8. What are two major points made by the reactor panel on evaluation of _______________(topic) that supplemented the main presentation?

9. What strategy for evaluation of __________(topic) evolved from this paper that has direct application in your work?

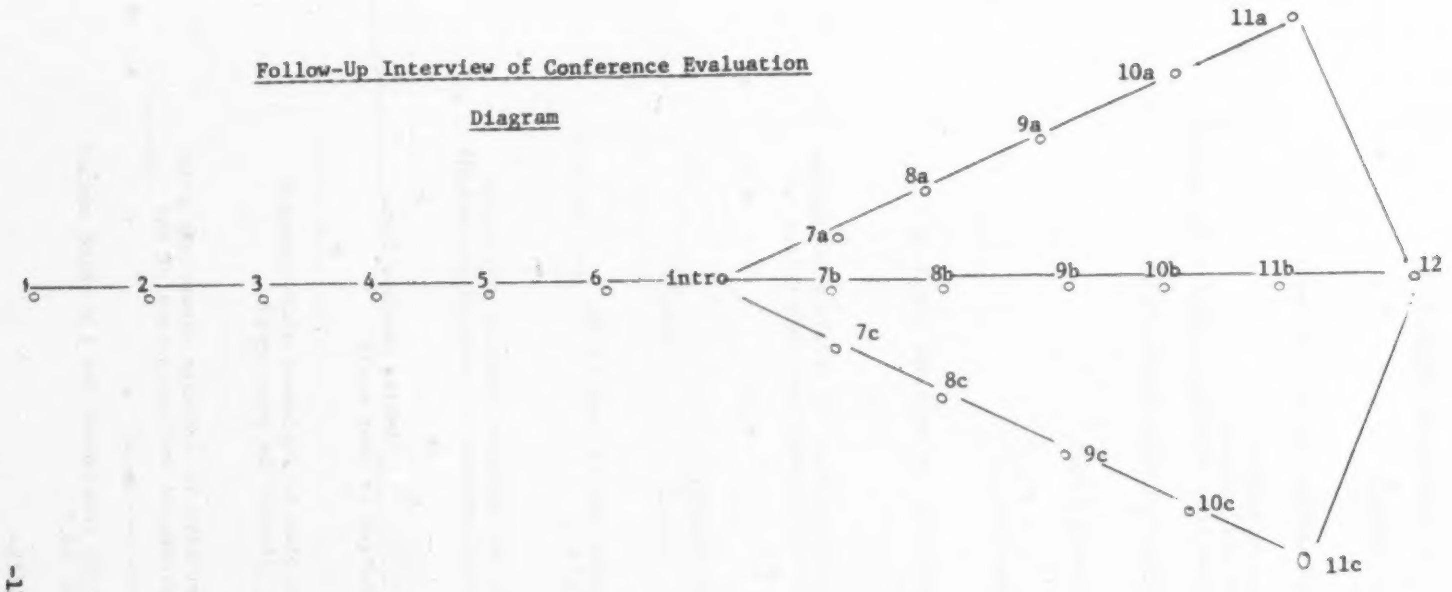
10. Will you briefly describe how you plan to implement this approach to evaluation of ________________(topic) in your work?

11. Where did you have the most opportunity to exchange viewpoints with others at the conference on the strengths and weaknesses of the _________ (topic) presentation by Dr. ________________?

12. What two topics would you like to be considered for the third annual Pa. Conf. on Post-Secondary Occup. Ed.?

Follow-Up Interview of Conference Evaluation

Diagram



1. Attendance
2. Personal interest
3. Least authoritative
4. Most authoritative
5. Where was best opportunity to exchange ideas on evaluation during this conference?
6. Ways in which PSU can better serve post-secondary institutions in occupational education?
7. What were the two major points made by ____________.
8. What are the two major points made by the reactor panel on evaluation of ______ that supplemented the main presentation?
9. What strategy for evaluation of ______ evolved from this paper that has direct application in your work?
10. Will you briefly describe how you plan to implement this approach to evaluation of _____ in your work?
11. Where did you have the most opportunity to exchange viewpoints with other participants on the strengths and weaknesses of the ____________presentation by ______________?
12. What are two topics that you would like to have considered for the third annual Pennsylvania Conference on Post-Secondary Occupational Education?

Welcome to The Pennsylvania State University and The Second Annual Pennsylvania Conference on Post-Secondary Occupational Education. The theme for this event is "Program Improvement through Evaluation." The major objectives of the conference are:

1. To provide authoritative presentations on evaluation of post-secondary occupational education in terms of:
    a. programs
    b. faculty
    c. institutions
2. To provide conferees with information that will better enable them to identify the most important factors in evaluation and to find approaches and guidelines usable by them in their respective positions as educators.
3. To provide an opportunity for educators and students of post-secondary occupational education to come together for an exchange of ideas and viewpoints on evaluation.
4. To continue the series of cooperative ventures between the university and Pennsylvania post-secondary institutions which are aimed at contributing to the overall improvement of post-secondary occupational education.

Sponsors of the conference are the Department of Education (Commonwealth of Pennsylvania) and The Pennsylvania State University (the Center for the Study of Higher Education and the Department of Vocational Education). Overall planning was done with the assistance of an advisory committee which had representation from the community colleges, commonwealth campuses of Penn State, Temple University, and the University Park campus of this university.

We hope you enjoy your stay here and that you find the conference interesting and useful.

Angelo C. Gillie
Conference Director

Robert L. Sheppard
Chairman of the Conference Advisory Committee

CENTER FOR THE STUDY OF HIGHER EDUCATION

THE PENNSYLVANIA STATE UNIVERSITY

The Center for the Study of Higher Education was established in January 1969 to study higher education as an area of scholarly inquiry and research. Its studies are designed not only to be relevant to the university and the Commonwealth of Pennsylvania, but also to colleges and universities throughout the nation. The immediate focus of the center's research falls into three broad areas--governance, graduate and professional education, and human service occupation programs in two-year colleges.

Research reports, monographs and position papers prepared by staff members of the center can be obtained on a limited basis. Inquiries should be addressed to the Center for the Study of Higher Education, 110 Willard Building, The Pennsylvania State University, University Park, Pennsylvania 16802.

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SELECTED PUBLICATIONS AVAILABLE FROM THE CENTER FOR THE STUDY OF HIGHER EDUCATION

Monographs

Pennsylvania Community College Faculty: Attitudes Toward Collective Negotiations, John W. Moore, and *Career Patterns and Educational Issues*, Robert A. Patterson, May 1971.

Institutional Self-Study at The Pennsylvania State University, Kenneth P. Mortimer and David W. Leslie (eds.), December 1970.

Numbered Reports

Centers and Institutes at The Pennsylvania State University: A Case Study, Mary M. Norman, March 1971, Report No. 9.

New Careers in Human Service: A Challenge to the Two-Year College (A Preliminary Report), Martha A. Burns, March 1971, Report No. 8.

The Academy and General Education, Stanley O. Ikenberry, December 1970, Report No. 7.

A Profile of Proliferating Institutes: A Study of Selected Characteristics of Institutes and Centers in 51 Land Grant Universities, Stanley O. Ikenberry, November 1970, Report No. 6.

Roles and Structures for Participation in Higher Education Governance: A Rationale, Stanley O. Ikenberry, August 1970, Report No. 5.

The Changing College Curriculum--Issues and Implications, G. Lester Anderson, and *Instructional Systems in Higher Education--Specifications for Individualization*, Stanley O. Ikenberry, January 1970, Report No. 2.

The "Special Admission"Student and the College, W. Frank Hull IV, November 1969, Report No. 1.

Occasional Reports

Academic Senates: Some Models with Background Material, G. Lester Anderson, Kenneth P. Mortimer, W. Frank Hull IV and David W. Leslie, March 1970.

Some Considerations Involved in Changing the Male/Female Ration at University Park, Harold G. Richard, June 1970.

Bibliographies

Selected Bibliography on the Concept of Leadership, Robert R. Smedley, June 1970, Number 4.

The Black Student in Higher Education: A Bibliography, W. Frank Hull IV, November 1969, Number 3.

Student Unrest on the American Campus: A Bibliography, David W. Leslie, November 1969, Number 2.